emec®
SIMPLE AS WATER

# GENERAL CATALOGUE

## WATER TREATMENT SYSTEMS

emec®
SIMPLE AS WATER

# WATER TREATMENT SYSTEMS

emec

# SIMPLE
# AS WATER

Water is a vital element. We are connected to it by a covenant of respect and pure gratitude.
For over 40 years we have been working to make the human-water relationship more harmonious, safe and natural, drawing from a single source of inspiration.

***The Semplicity.***

## Flexibility, with three fundamental principles

Since 1982, we have been designing and producing reliable, cutting-edge instruments for water treatment and chemical dosage. In a world that changes so fast, flexibility and innovation are fundamental to us.
As a company, we are open to change, because we are rooted in three fundamental principles: constant research, extreme precision, healthy relationships.

### CONSTANT RESEARCH

Being at the cutting edge means constant study. Our R&D and design departments are where our heart beats.
Extremely high-profile engineers and technicians are committed to developing software and designing hardware, but also to studying and evaluating hydraulic and mechanical components.
Just like water, we have branched out over time, spreading out into wide-ranging areas.

- Industrial water treatment
- Purification plants
- Treatment of water used in industrial processes
- Chemical-physical purification processes
- Bacteriological purification systems
- Sewage irrigation plants
- Chemical industry
- Food processing Industry
- Cooling towers
- Refineries
- Wellness centres
- Swimming pools
- Car washes

### EXTREME PRECISION

Our second fundamental principle is complete control of our production line.
We are entirely responsible for every stage of the process, from invention to delivery. Our products undergo up to 10 quality checks and are tested four times before reaching the customer.
The quality management system of our production process is ***ISO 9001*** certified and has customer satisfaction as its ultimate goal, as well as continuous improvement of company performance.
Customers satisfaction comes hand-in-hand with ensuring safety for them, their operators and final users.
Our dosing pumps and controllers are ***UL*** certified to guarantee full compliance with general requirements for safety of use, while ***NSF*** certifications guarantee that our pumps do not release hazardous pollutants into the water and therefore are fully safe for use in contact with drinking water, for example in the food production industry, or at recreational facilities like swimming pools and spas.

### HEALTHY RELATIONSHIPS

Extremely high performance, top quality and high technology are our greatest assets. But there is more.
Every day, we safeguard something equally important: human capital.
Our co-workers are the best professionals on the market; the most expert and competent people.
For this reason our organizational model is designed to manage their safety and health in an organic and systematic way, respecting the international standard ***ISO 45001.***
At the moment our company numbers nearly 200 employees, 35% of these are women. Statistically, this is a highly respectable percentage in a technical sector like ours. It is a number that is destined to grow.

# The difference between consultant and supplier

Over the years, we have learnt to be good listeners, which is fundamental to an understanding of customers' real needs. This delicate task is handled by our Business Unit, which is entirely made up of technicians.
Their in-depth knowledge of every step of the production process makes it possible for them to offer focussed consulting, both for the choice and the personalisation of products.
We can offer a high level of customisation, which ranges from branding to hardware and software modifications made to standard models.

### A BACK OFFICE THAT IS ALWAYS UP FRONT

It is one of the feathers in our cap: a helpful and competent back office. Every day, their important contribution ensures that every aspect of our supply process is impeccable. This excellent care and attention contributes to the fact that the number of customers who choose to leave us is close to zero.

### QUALITY FROM THE OUTSET TO AFTER-SALES

For us, closing a deal does not mean  the end of a relationship. We remain at our customers' disposal to make sure that, over time, our products are working properly. We are ready to respond to any request in real time, even outside office hours.

### COMPETENCE THAT SETS A PRECEDENT

As leaders in our sector, we realise that we have a great responsibility: preparing specialists and customers so that they can use the products we produce in the best possible way.
That is why we created the Emec Training Program: a series of training courses dealing with installation and maintenance in both private and company contexts.
Our training and refresher courses are run at our expense; and that includes participants' logistics costs. So you do not have to pay, but you earn in terms of competence.

# A world of care and attention

Water is the vital element on which our business is based. The least we can do to respect this inestimable resource is treat the environment in the best possible way. It is not just about abiding by laws, it is about respect for our ethics.

### LESS IMPACT, MORE SUSTAINABILITY

We think of sustainability as an endless path: each responsible step we take further reduces our company's environmental footprint.
To this end, we have adopted an Environmental Management System compliant with the international standard **ISO 14001**. This makes it possible to reduce atmospheric and acoustic emissions well below the prescribed limits; to rationalise consumption of water, electricity and gas; and to reduce the production of waste and the contamination of the land.
Sustainability also means giving waste material a second life: we recycle or reclaim 93% of circuit boards, paper and plastic; as well as shreds or chips of iron, aluminium, copper, bronze, brass and wood. In addition, we are equipped with an extractor that separates water from oil during the machine cleaning process, so that it can be reused in the production process.

### MAXIMUM EFFICIENCY. STARTING WITH ENERGY

We have opted for renewable energy sources, state-of-the-art boilers, and intelligent air conditioning. This has made it possible for us to drastically reduce our consumption of gas and electricity. The only energy we do not want to save is the one we put into our work.

### FROM GOOD INTENTIONS TO BEST PRACTICES

Everything we do to improve sustainability is shared with our employees, collaborators and partners through information and training activities. Every update is included in our Integrated System Manual: a tool that we ask everyone to respect in order to ensure that good intentions correspond to the day to day practices at work.

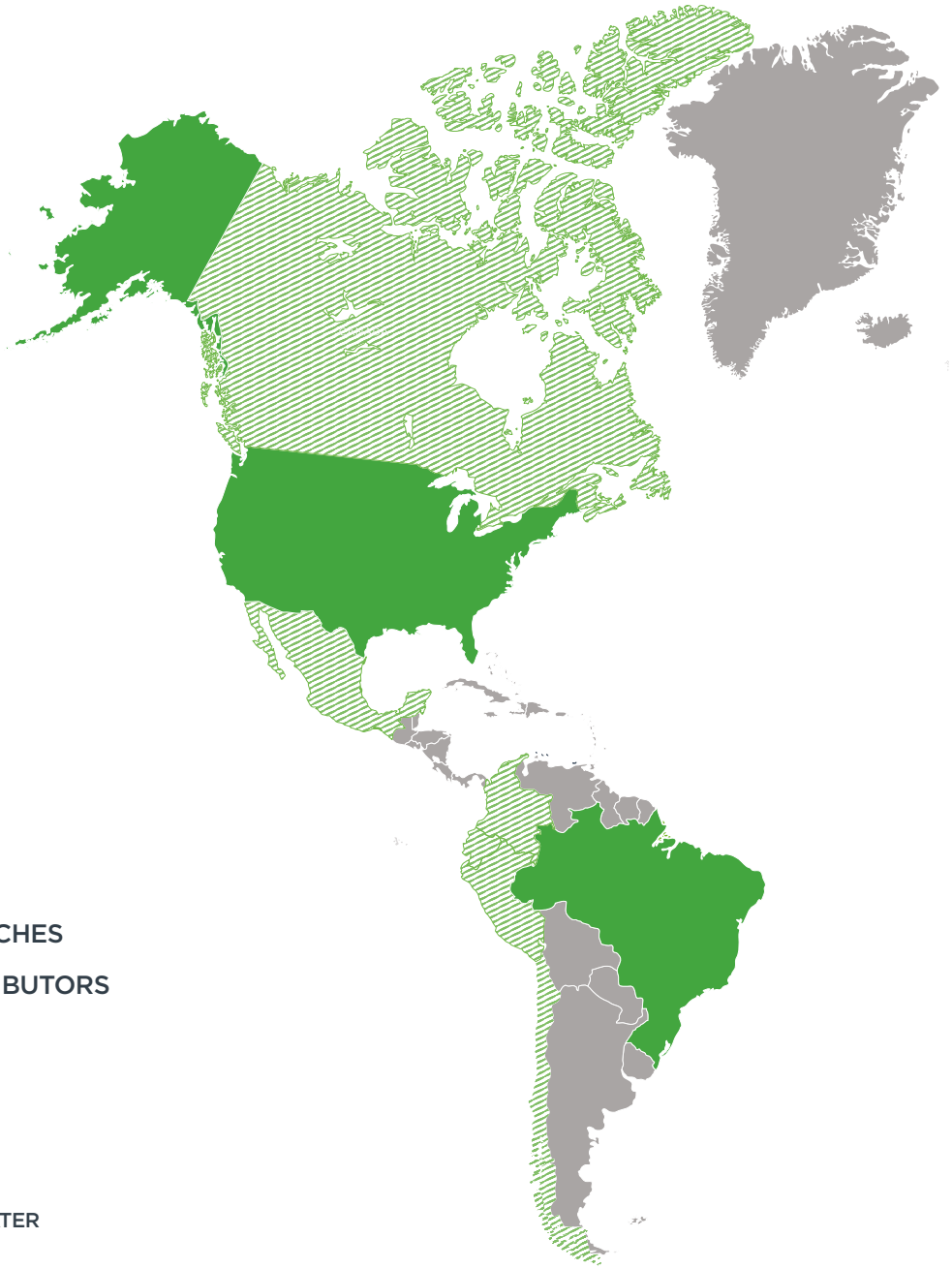
### EXCLUSIVE DISTRIBUTORS FOR EXCLUSIVE QUALITY

Becoming an exclusive Emec dealer in your country is an excellent opportunity for a variety of reasons:

- The excellent value for money of our references;
- Our company is extremely solid with a long-standing management structure;
- Guaranteed, qualified support to manage processes and solve technical and administrative problems;
- An in-house shipping department that can guarantee lead times (from order to shipment) to any country in the world;
- Access to training and refresher courses;
- Assistance is available directly online and can be accessed at any time. through the Reserved Area on **emecpumps.com**;
- Precious support for branding and communication.

# NOTHING IS MORE SIMPLE THAN COMPLEXITY

The numbers speak for themselves. We are an extremely prolific company, with high-level technical know-how. We manage articulate and complex processes with increasingly sophisticated standards of innovation.



BRANCHES

DISTRIBUTORS

**EMEC**
SIMPLE AS WATER

**40+** years of excellence
**250+** employees
**88** countries
**10** branches
**10+** sectors
**120.000** dosing pumps/year
**15.000** controllers/year
**26.000** probes & sensors/year
**8.000** dosing station/year
**85.000** accessories

MADE IN ITALY

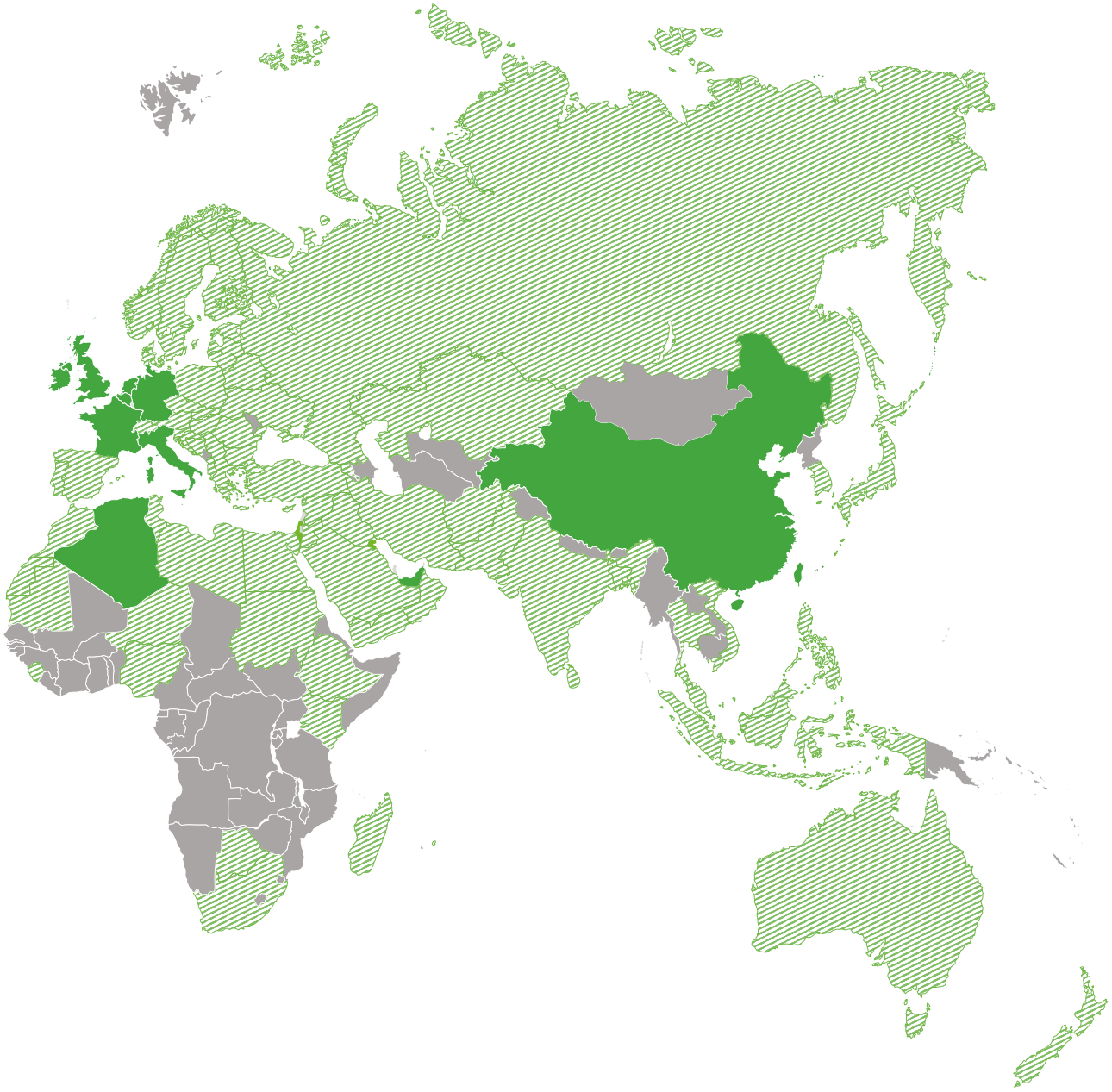
**100% MADE IN ITALY**
All our products are 100% Made in Italy

5 YEARS WARRANTY

**WARRANTY**
5-years warranty for our dosing pumps and controllers.
*Terms and conditions apply*

# Emec Worldwide

And all with the same objective: *to make the lives of companies and professionals increasingly simple.*



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# PRISMA Series

## Stepper motor dosing pumps

PRISMA

Wi Fi™

APP **MY EMEC**

Modbus

NIMBUS

DIGITAL SERVICES

### MAX FLOW RATE

80 **l/h**

### MAX PRESSURE

25 **bar**

### POWER SUPPLY

12-24 **VDC**

24 **VAC**

100-240 **VAC**

### VENTING

*Manual*

### FEATURES

- Pump head available in PVDF, PP, SS and PMMA
- Accessories available in PVDF and PP
- Stepper motor
- Multifunctional software
- High-strength PTFE diaphragm
- Horizontal mounting
- RGB backlit LCD display

### STEPPER MOTOR

SLOW MODE | TURNDOWN RATIO 1:4800 | MULTI-COLOUR DISPLAY | MULTIFUNCTION

### WORKING MODES

CONSTANT | MODBUS | NIMBUS | CONSTANT WITH EXTERNAL INPUT | PPM | % | mA | PAUSE-WORK | WEEKLY TIMER | MLQ | CC/PULSE | VOLT | BATCH EXTERNAL/MANUAL

### PUMP HEADS

**PVDF** | **PP** | **SS** AISI316L | **PMMA**

### ACCESSORIES

**Foot filter with level probe**

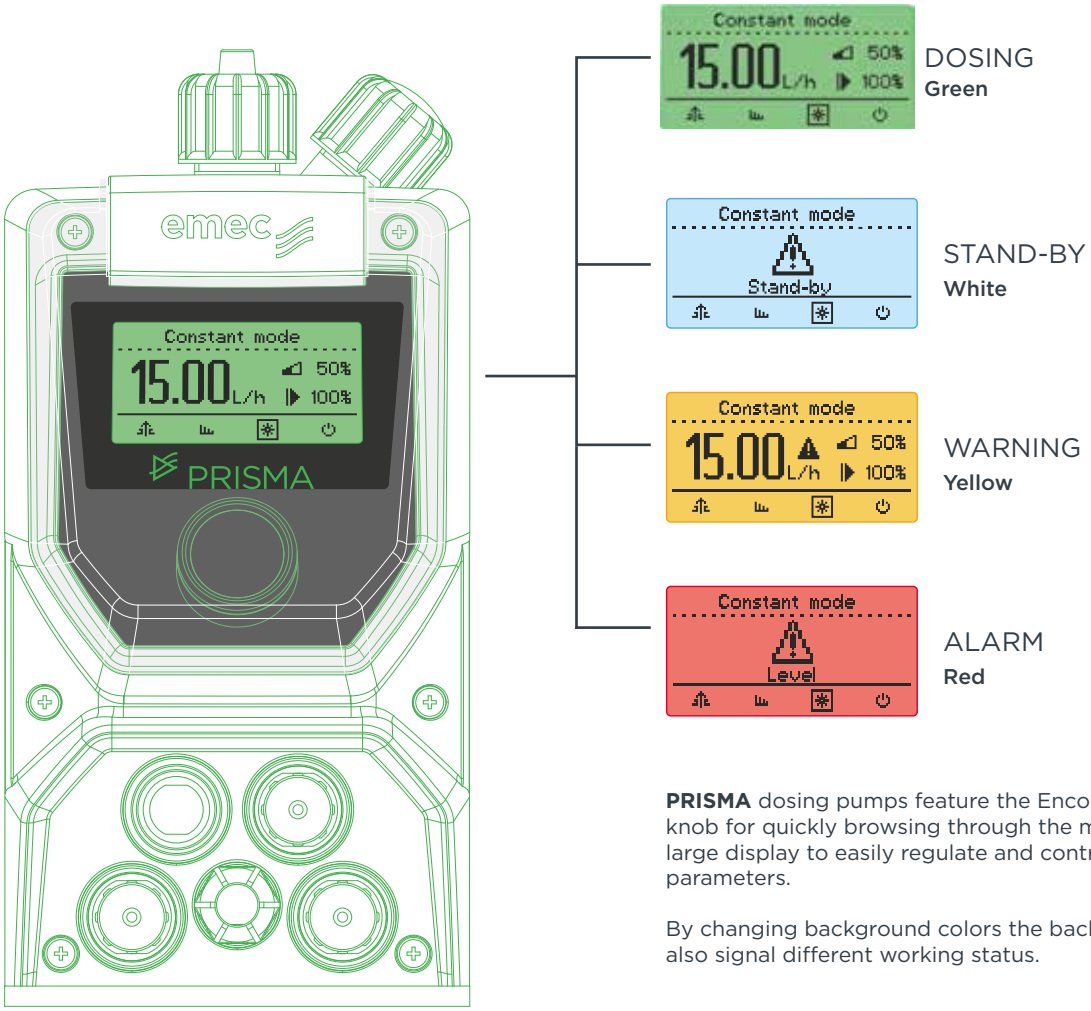
**Injection valve 1/2" or 3/4"**

**PRISMA** stepper motor-driven dosing pump has been designed by EMEC to be the best solution for offering high-accuracy metering and extreme reliability.

Thanks to the new stepper motor and to the Multifunction software, **PRISMA** dosing pumps offer complete control over dosing speeds and working modes as well as great flexibility, meeting even extremely complex application needs.

## INFO COLOR SCREEN

REAL-TIME FLOW




**PRISMA** dosing pumps feature the Encoder control knob for quickly browsing through the menus and a large display to easily regulate and control the working parameters.

By changing background colors the backlight display can also signal different working status.

### TURNDOWN

**PRISMA** stepper motor-driven pumps give you the most accurate control over the stroke speed, providing an outstanding turndown ratio of up to **4800:1**.

It means **PRISMA** can split up the dosing process into a maximum of **4800 steps** in order to offer the most homogeneous and precise distribution of the product to dose according to the required application.

### SLOW MODE

Extreme versatility of **PRISMA** dosing pumps is also due to **Slow Mode** function.

With Slow Mode enabled you can reduce the suction speed from **100** to **30%** of the normal speed, making easier and more reliable the priming and the dosing even when you have to work with particularly viscous liquids.

# WNPHXX Series

## Stepper motor dosing pumps

WN

WIFI

NIMBUS

DIGITAL SERVICES

APP **MY EMEC**

ONLINE STATS

CUSTOMIZABLE

**MAX FLOW RATE**

12 **l/h**

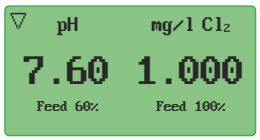
**MAX PRESSURE**

2 **bar**

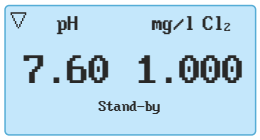
**POWER SUPPLY**

240 **VAC**

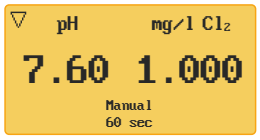
100-240 **VAC**



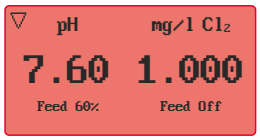

DOSING
**Green**




STAND-BY
**White**




WARNING
**Yellow**




ALARM
**Red**

### FEATURES

- No. 2 high-precision stepper motors
- Precision through peristaltic dosing
- Great flexibility of use (1 m3 - 250 m3)
- Low maintenance requirements (longlasting biocompatibile peristaltic hose)
- Scheduled maintenance alerts
- Advanced operator safety (inverters and low-permeability materials)
- New automatic dosage adjustment system
- Built-in Wi-Fi connectivity
- Remote control via NIMBUS/ My EMEC App

## BASIC MODEL ACCESSORIES

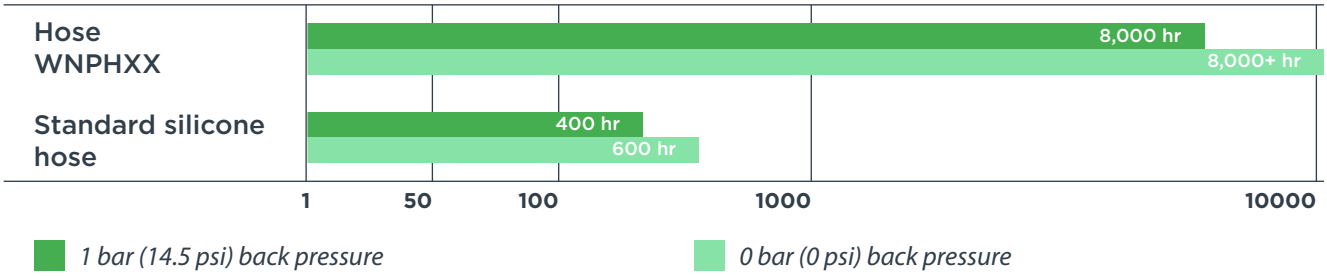
- 2 PVDF injection valves (0.3 bar)
- 2 PVDF foot strainers with PVDF level probes
- 8 meters of suction hose (flexible PVC)
- 2 long-lasting biocompatible hoses 4.8x1.6 (standard equipment)
- 2 long-lasting biocompatible hoses 1.6x1.6 (standard equipment)

# PERFORMANCE

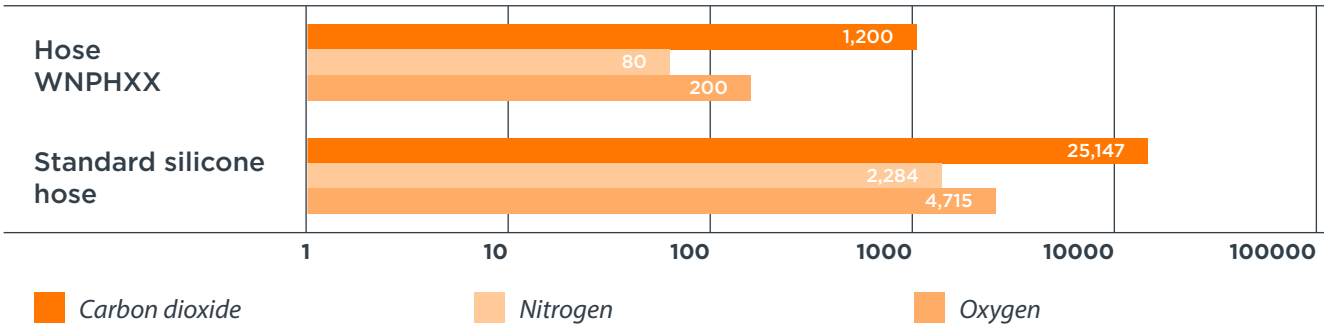
## LONG-LIFE BIOCOMPATIBLE HOSE

| Hose | Pressure | | Flow Rate | | RPM range |
|---|---|---|---|---|---|
| | *bar* | *PSI* | *l/hr* | *gal/hr* | *rpm* |
| **Ø 1.6x1.6** | **2** | **36.2** | **0.018 - 1.8** | **0.0047 - 0.47** | **1 - 100** |
| **Ø 4.8x1.6** | **2** | **36.2** | **0.12 - 12** | **0.0317 - 3.17** | **1 - 100** |

### Hose life comparison




### Permeability coefficient comparison ($x10^{-11}$)




# CHANNELS

## UP TO TWO CHANNELS (+ TEMPERATURE)

pH · REDOX · CLOSED AMPEROMETRIC CELLS · OPEN AMPEROMETRIC CELLS (CHLORINE) · CONDUCTIVITY · TURBIDITY

**CLOSED AMPEROMETRIC CELLS**

- FREE CHLORINE
- TOTAL CHLORINE
- BROMINE

# WT PER Series

## Peristaltic dosing pumps with stepper motor

WT

WIFI

NIMBUS

DIGITAL SERVICES

APP **MY EMEC**

ONLINE STATS

CUSTOMIZABLE

**MAX FLOW RATE**

12 **l/h**

**MAX PRESSURE**

2 **bar**

**POWER SUPPLY**

100-240 **VAC**

DOSING
**Green**

STAND-BY
**White**

WARNING
**Yellow**

ALARM
**Red**

## FEATURES

- No. 2 high-precision stepper motors
- High precision through peristaltic dosing
- Low maintenance requirements (long-life, biocompatible peristaltic tubing)
- LCD display with backlighting that adapts to device operation
- Encoder knob for instrument control
- PC+ABS box
- Flow control input
- Conductivity reading
  - 0/3 mS - 0/30 mS (ECDINDPT)
  - 0/10 mS (ECDSINDPT)
  - 0/10 mS (ECDCCPT)
- Alarms: level, no flow
- Configurable digital inputs (N.O. / N.C.)
- Delayed start of dosing
- Permanent data storage with system log viewable on display
- Bluetooth LE / 2.4Ghz WiFi connection for APP and Remote Control
- Upgradable firmware (via OTA)
- Installation class II (IEC/EN 61010-1)
- Pollution level 2 (IEC/EN 61010-1 and IEC 60664-1)
- IP 65 protection (IEC/EN 60529)
- Manual or automatic bleed
- Built-in MODBUS
- Vertical installation
- Remote control via NIMBUS / My EMEC App

## ACCESSORIES

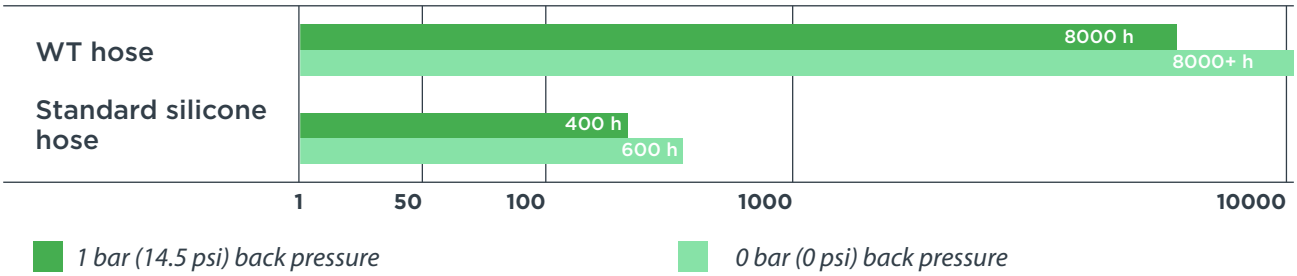
- 2 long-life biocompatible hoses, 4.8 × 1.6 mm (standard supply)
- 2 long-life biocompatible hoses,1,6x1 ,6 (included accessories)

# PERFORMANCE

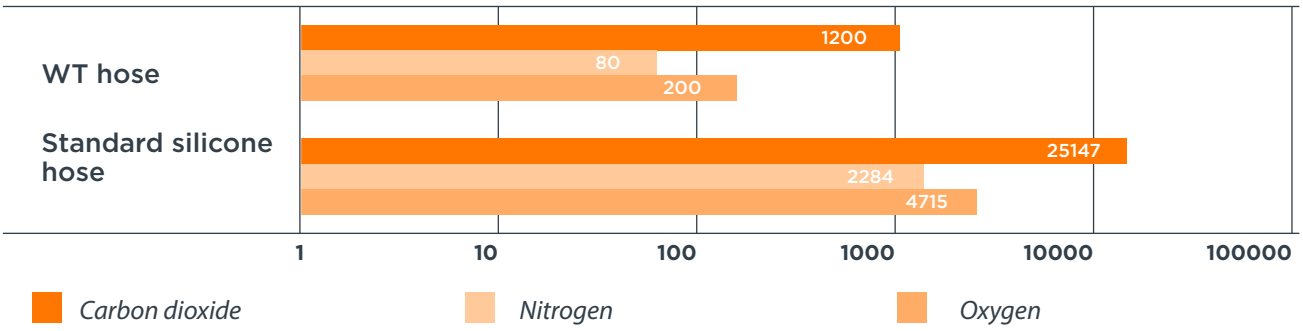
| Hose | Pressure | | Flow Rate | | RPM range |
|---|---|---|---|---|---|
| | *bar* | *psi* | *l/h* | *gal/h* | *rpm* |
| **Ø 1,6x1,6** | **2** | **29,0** | **0 - 1,8** | **0 - 0,48** | **1 - 100** |
| **Ø 4,8x1,6** | **2** | **29,0** | **up to 12** | **up to 3,17** | **1 - 100** |

## LONG-LIFE BIOCOMPATIBLE TUBING

### Hose life comparison




### Permeability coefficient comparison (x10$^{-11}$)




# INPUTS

- CONDUCTIVITY PROBE
- INLET WATER METER
- LEVEL 1 AND LEVEL 2
- FLOW SENSOR
- STANDBY MODE

# OUTPUTS

- ALARM (VOLTAGE-FREE RELAY CONTACT)
- MODBUS RTU PORT
- PUMP 1 AND PUMP 2
- BLEED (WATER DISCHARGE)

# VELON Series

## Peristaltic dosing pumps with stepper motor

VELON

WIFI

NIMBUS
DIGITAL SERVICES

APP **MY EMEC**

ONLINE STATS

CUSTOMIZABLE

**MAX FLOW RATE**

12 **l/h**

**MAX PRESSURE**

2 **bar**

**POWER SUPPLY**

12 | 24 **VDC**

24 **VAC**

100-240 **VAC**

VELON is a state-of-the-art compact peristaltic dosing pump, equipped with a high-precision, electronically-controlled multifunction stepper motor that guarantees constant and regular chemical product dosing, even in demanding working conditions and with load variations. Designed to offer a complete, easy-to-use solution in all installation contexts that require precise, reliable, quiet and safe operation.

### ACCESSORIES

- 1 PVDF injection valve (0.3 bar)
- 1 PVDF foot filter with level probe
- 4 m suction tubing (flexible PVC)
- 1 long-life biocompatible tubing, 4.8 × 1.6 mm (standard supply)
- 1 long-life biocompatible tubing, 1.6 × 1.6 mm (included accessory)

## FEATURES COMMON TO THE ENTIRE SERIES

| Microprocessor | Pressure (bar - psi) | RPM Range (rpm) | Protection | Power Supply | installation Class |
|---|---|---|---|---|---|
| Next-Generation, High-Performance | 2 (29) | from 1 to 100 | IP65 | 24 \| 100–240 VAC, 12VDC, 24VDC | II |

| Flow Rate Range (l/h – gal/h) (Ø1,6x1,6) | Flow Rate Range (l/h – gal/h) (Ø4,8x1,6) | Operating Temperature | Additive Temperature | Manufacturing Materials | Remote Control |
|---|---|---|---|---|---|
| 0,018 – 1,8 l/h<br>0,0047 – 0,47 gal/h | 0,12 – 12 l/h<br>0,0317 – 3,17 gal/h | 10 – 45 °C<br>55 – 113 °F | 0 – 50 °C<br>32 – 122 °F | PC/ABS, PVDF, POM, TPV | Web (NIMBUS) e App (MyEmec) |

# AVAILABLE VERSIONS

DIGITAL

ANALOG

## VELON MF

## VELON PO

## VELON PM

## VELON CL

## SPECIFIC MODEL FEATURES

| | Velon MF | Velon PO | Velon CL | Velon PM |
|---|---|---|---|---|
| DESCRIPTION | Multifunction pump with extensive dosing modes and digital management, including remote control | Versatile pump with proportional adjustment and remote control | Essential, practical pump for constant dosing with manual adjustment via potentiometer | Pump with MODBUS RTU integration, ideal for automated systems |
| INTER./CONT. | Backlit RGB LCD display, encoder, remote management via app/web | Backlit LCD display, encoder, remote management via app/web | Front potentiometer, LED, ON/OFF button | MODBUS RTU, LED, ON/OFF button |
| WORKING MODE | Constant, CC/Pulse, PPM, %, MLQ, Batch, Volt, mA, Pulse, Weekly Program, Ext Constant | Proportional, Autodosing pH and/or Redox | Constant | External Control |
| MAINTENANCE | Scheduled maintenance via activity meters | Scheduled maintenance via activity meters | Scheduled maintenance via activity meters | Scheduled maintenance via activity meters |
| INPUT | MODBUS RTU, Multi-function, Level | MODBUS RTU, Standby, Level, Serial Probe | Level | MODBUS RTU, Level |
| OUTPUT | Alarm (optional) | Alarm (optional) | Alarm (optional) | Alarm (optional) |
| CONNECTIVITY | Wi-Fi & Bluetooth | Wi-Fi & Bluetooth | - | - |
| FW UPDATE | OTA | OTA | - | - |

# AMS Series

## Solenoid-driven dosing pumps

### FEATURES

- Electronic flow rate adjustment
- Mechanical adjustment of single injection volume (from 100% to 0%)
- Manual or automatic venting
- High-strength PTFE diaphragm
- Horizontal mounting
- Pump head in PVDF, PP, SS, PMMA
- Accessories in PVDF, PP

### MAX FLOW RATE

60 **l/h**

### MAX PRESSURE

25 **bar**

### POWER SUPPLY

12 | 24 **VDC**
24 **VAC**
115 **VAC**
230 **VAC**
*Compressed Air*

### VENTING

*Manual*
*Self*

DIGITAL

## AMS MF | PH | RH

**AMS MF** multifunction

**AMS PH** built-in pH-meter (reading & adjustment)

**AMS RH** built-in ORP-meter (reading & adjustment)

ANALOG

## AMS PLUS | CL PLUS | CO PLUS

**AMS PLUS** costante / costante 1-10
moltiplicatore 1-10
divisore 1-10 / 1-100 / 1-1000
segnale in mA

**AMS CL PLUS** costante con controllo di livello e divisore 1/10

**AMS CO PLUS** costante con divisore 1/10

### PUMP HEADS

*Also available with configuration:*

- **Manual venting**
- **Compressed air**
- **Self venting**
- **Viscous liquids**
- **Low-viscosity liquids**

**PVDF** **PP** **SS** AISI316L **PMMA** **LPV** **P**

### ACCESSORIES

**Foot filter with level probe**

**Injection valve 1/2" or 3/4"**

# K Series

## Solenoid-driven dosing pumps

### FEATURES

- Electronic flow rate adjustment
- Mechanical adjustment of single injection volume (from 100% to 0%)
- Manual or automatic venting
- High-strength PTFE diaphragm
- Horizontal mounting
- Pump head in PVDF, PP, SS, PMMA
- Accessories in PVDF, PP

### MAX FLOW RATE

18 **l/h**

### MAX PRESSURE

20 **bar**

### POWER SUPPLY

12-24 **VDC**
24 | 115 | 230 **VAC**
100 | 240 **VAC**

### VENTING

*Manual*
*Self*

DIGITAL

## KMS DC | MF | PH | RH | CL

**KMS DC** constant

**KMS MF** multifunction + weekly timer

**KMS PH** built-in pH-meter (reading & adjustment)

**KMS RH** built-in ORP-meter (reading & adjustment)

**KMS CL** built-in chlorinometer (reading & adjustment)

ANALOG

## K PLUS | CL PLUS | CO PLUS

**K PLUS** constant / constant 1-10
multiplier 1-10
divider 1-10 / 1-100 / 1-1000
mA signal

**K CL PLUS** constant with level control and 1/10 divider

**K CO PLUS** constant with 1/10 divider

### PUMP HEADS

*Also available with configuration:*

**Manual venting** **Self venting** **Low-viscosity liquids**

**PVDF**

**PP**

**SS** AISI316L

**PMMA**

**LPV**

### ACCESSORIES

**Foot filter with level probe**

**Injection valve 1/2”**

# T Series

## Solenoid-driven dosing pumps

### FEATURES

- Electronic flow rate adjustment
- Manual or automatic venting
- High resistance diaphragm
- Wall mounting
- Pump head in PVDF, PP, SS, PMMA
- Accessories in PVDF, PP

### MAX FLOW RATE

100 **l/h**

### MAX PRESSURE

20 **bar**

### POWER SUPPLY

12 | 24 **VDC**
24 **VAC**
115 **VAC**
230 **VAC**

### VENTING

*Manual*
*Self*

DIGITAL

## TMS DC | MF | PH | RH

**TMS DC** constant

**TMS MF** multifunction + weekly timer

**TMS PH** built-in pH-meter (reading & adjustment)

**TMS RH** built-in ORP-meter (reading & adjustment)

ANALOG

## T CL | CO

**TCL** constant with level control

**TCO** constant

### PUMP HEADS

*Also available with configuration:*

**Manual venting** **Self venting** **Compressed air**
**Viscous liquids**

**PVDF** **PP** **SS** AISI316L **PMMA** **P**

### ACCESSORIES

**Foot filter with level probe**

**Injection valve 1/2" or 3/4"**

# V Series

## Solenoid-driven dosing pumps

### FEATURES

- Electronic flow rate adjustment
- Manual or automatic venting
- High-strength PTFE diaphragm
- Wall mounting
- Pump head and standard accessories in PVDF
- Also available in silenced and ultra-silenced versions

### MAX FLOW RATE

16 l/h

### MAX PRESSURE

20 bar

### POWER SUPPLY

12 | 24 VDC
24 | 115 | 230 VAC
100-240 VAC

### VENTING

*Manual*
*Self*

DIGITAL

**VMS MF | PO**

**VMS MF** multifunction + weekly timer

**VMS PO** built-in pH-meter or ORP-meter (read & adjust). Menu-settable parameter

ANALOG

**V CL | CO**

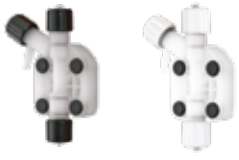
**VCL** constant with level control

**VCO** constant

### PUMP HEADS

*Also available with configuration:*

**Manual venting** **Self venting**



**PVDF** **PP**

### ACCESSORIES

**Foot filter with level probe**

**Injection valve 1/2”**

# WT Series

## Solenoid-driven dosing pumps

WT

WIFI

NIMBUS

DIGITAL SERVICES

APP **MY EMEC**

ONLINE STATS

CUSTOMIZABLE

**MAX FLOW RATE**

6 **l/h**

**MAX PRESSURE**

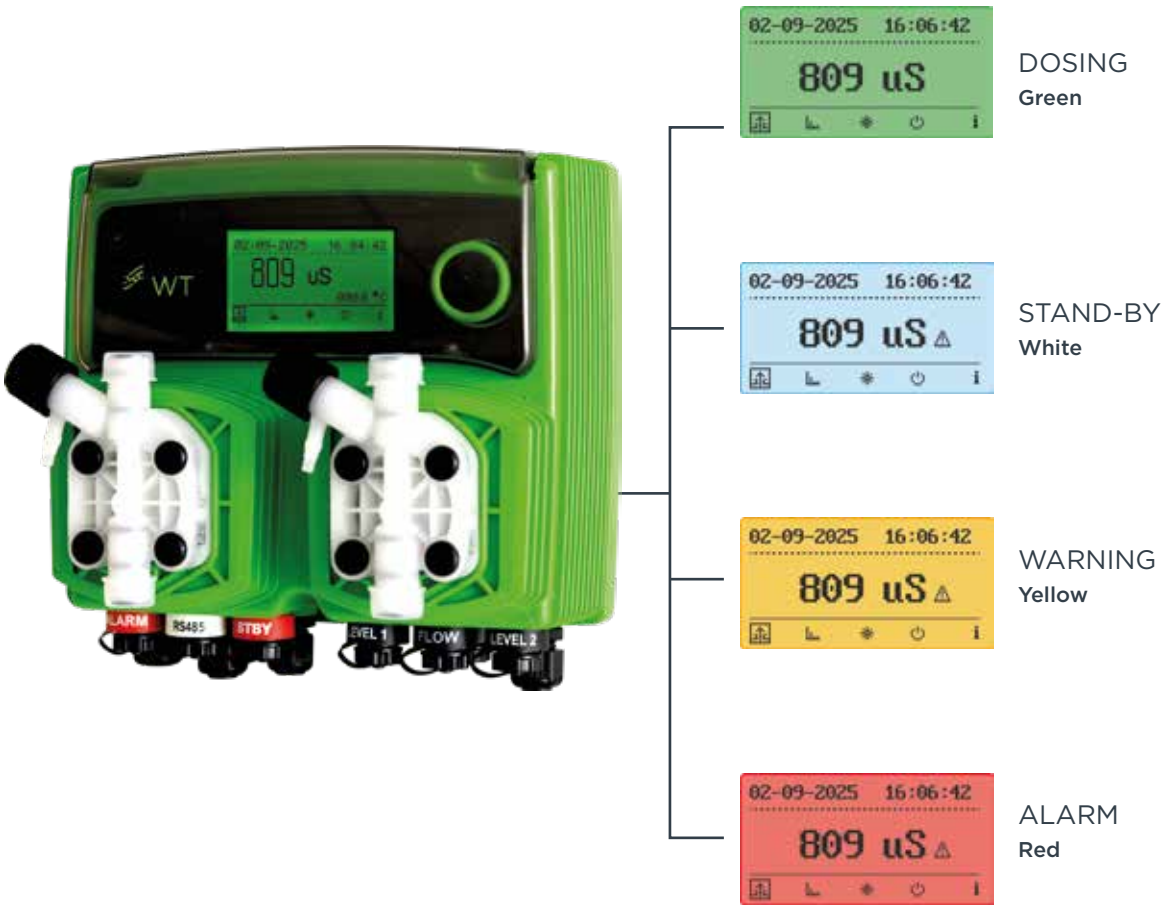
7 **bar**

**POWER SUPPLY**

115 **VAC**

230 **VAC**

# RGB DISPLAY



# PERFORMANCE

| Pressure | Flow Rate | | sPM Range |
|---|---|---|---|
| *bar (psi)* | *l/h* | *gal/h* | *spm* |
| up to 7 bar | up to 6 l/h | up to 1,58 gal/h | 180 |

# FEATURES

- Dual Magnet, 45 strokes/min, continuously adjustable (1%–100%)
- Double Ball Check Valves
- Standard PVDF Hydraulic Components
- Wide LCD Display with Adaptive Backlighting
- Rotary Encoder Knob for Instrument Control
- PC + ABS Enclosure
- Flow Control Input
- Conductivity Measurement:
  - 0–3 mS / 0–30 mS (ECDINDPT)
  - 0–10 mS (ECDSINDPT)
  - 0–10 mS (ECDCCPT)
- Alarms: Level, No-Flow
- Digital Inputs Configurable as N.O. or N.C.
- Delayed Dosing Start
- Permanent Data Storage with System Log Viewable on Display
- Bluetooth® LE / 2.4 GHz Wi-Fi Connectivity for App and Remote Control
- Firmware Upgradeable via OTA (Over-the-Air)
- Installation Class II (IEC / EN 61010-1)
- Pollution Degree 2 (IEC / EN 61010-1 and IEC 60664-1)
- IP65 Protection Rating (IEC / EN 60529)
- Manual or Automatic Priming
- Integrated MODBUS
- Vertical Installation

# INPUT

CONDUCTIVITY PROBE · INLET WATER METER · LEVEL 1 AND LEVEL 2 · FLOW SENSOR · STANDBY MODE

# OUTPUT

ALARM (VOLTAGE-FREE RELAY CONTACT) · MODBUS RTU PORT · PUMP 1 AND PUMP 2 · BLEED (WATER DISCHARGE)

# WDPHXX Series

## Solenoid-driven dosing pumps with controller

WD

Wi Fi

Modbus

NIMBUS

DIGITAL SERVICES

**MAX FLOW RATE**

10 l/h

**MAX PRESSURE**

7 bar

**POWER SUPPLY**

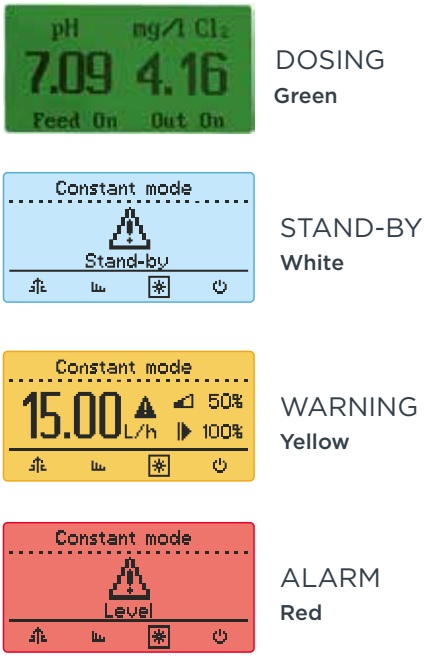
230 VDC

115 VAC

**VENTING**

*Manual*

*Self*




DIGITAL

## WDPH RH | CL | CF | CA | OS

**WDPHRH** acid (pH) and disinfectant (ORP)

**WDPHCL** acid (pH) and chlorine

**WDPHCF** acid, flocculant (g/h) and 230VAC output for Cl

**WDPHCA** acid, algicide and 230VAC output for chlorine

**WDPHOS** acid (pH) and active oxygen

### FEATURES

- Specific for swimming pools also in peristaltic version
- Control and regulating instrument with two built-in dosing pumps and standard PVDF accessories
- Wall mounting
- Easy programming with encoder and easy-nav navigation system
- Double pump head
- Optional: RS485 port for remote control (Wi-Fi, Ethernet, GSM, USB, Modbus)

### PUMP HEADS

*Also available with configuration:*

**Manual venting** **Self venting**

**PVDF** **PP**

### ACCESSORIES

**Foot filter with level probe** **Injection valve 1/2”**

# R Series

## Compressed air dosing pumps

### FEATURES

- Specifically designed for car washes
- Constant dosing
- 3 installation modes: horizontal, wall, DIN rail
- Multiple installation (side by side)
- Mechanical volume adjustment 0-100% of single injection

### MAX FLOW RATE

12 l/h

### MAX PRESSURE

6 bar

### POWER SUPPLY

*Compressed Air*

RAC

RACV

RACP

### R AC | ACV | ACP

**RAC** Pneumatic pump

**RACV** Pneumatic pump with solenoid valve

**RACP** Pneumatic pump with priming button

### PUMP HEADS

Pump Head

Diaphragm

### INSTALLATION OPTIONS

DIN rail

Wall

### ACCESSORIES

Foot filter

Injection valve 1/2”

# PRIUS D MF Series | DIAPHRAGM

## Multifunction electronic control motor-driven pumps

PRIUS MF

Modbus

2G 2D 3G 3D

**MAX FLOW RATE**

1000 l/h

**MAX PRESSURE**

10* bar

**POWER SUPPLY**

115 VAC

230 VAC

**VENTING**

*Manual*

*Self*

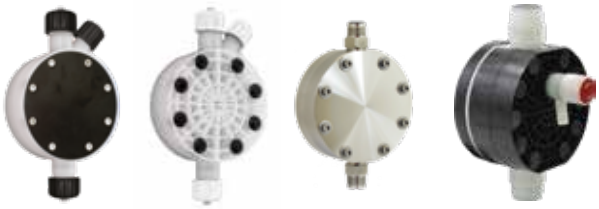
DEFAULT GEAR BOX POSITION

ALTERNATIVE GEAR BOX POSITION

### FEATURES

- High-strength PTFE diaphragm
- Large display with EASYNAV navigation system and encoder knob
- Pump housing can be rotated 90 degrees for optimal installation
- Pump head in PVDF, PP, SS
- Accessories in PVDF, PP
- Integrated inverter
- Mechanical single injection volume adjustment (100-0%)
- Working modes: Constant - ppm - % - mlq - pause; timer; weekly; pulse; mA; Volt and Batch
- Level input
- Stand-by
- MODBUS (optional)
- IP65 motor (optional)
- 4/20 mA output (optional)
- *Also available PRIUS D MF **HIGH PRESSURE** versions up to 100 bar

### PUMP HEADS



**PVDF** **PP** **SS** AISI316L **UMS****

**For capacities above 350 l, with integral pressure relief valves

ATTENTION:In case of spare parts orders, the UMS pump head is supplied without the corresponding safety valve. If required, the safety valve must be ordered separately and will be charged additionally.

# PRIUS P MF Series | PISTON

## Multifunction electronic control motor-driven pumps

PRIUS MF

Modbus

2G 2D 3G 3D

**MAX FLOW RATE**
320 l/h

**MAX PRESSURE**
10 bar

**POWER SUPPLY**
230 VAC
115 VAC

**VENTING**
*Manual*
*Self*

DEFAULT GEAR BOX POSITION

ALTERNATIVE GEAR BOX POSITION

### FEATURES

- Ceramic or Stainless Steel piston
- Display with EASYNAV navigation system and Encoder knob
- Pump housing can be rotated 90 degrees for optimal installation
- Integrated inverter
- Mechanical single injection volume adjustment (100-0%)
- Working modes: Constant - ppm - % - mlq - pause; weekly; pulse; mA; Volt and Batch
- Level input
- Stand-by
- MODBUS (optional)
- IP65 motor (optional)
- 4/20 mA output (optional)

### PUMP HEADS

**PP** **SS** AISI316L

### PISTONS

**CERAMIC** SIALOX96 **SS** AISI420

# PRIUS D Series | DIAPHRAGM

## Motor-driven pumps

PRIUS

2G 2D 3G 3D

**MAX FLOW RATE**

1000 l/h

**MAX PRESSURE**

10* bar

**POWER SUPPLY**

115 VAC

230 VAC

380 VAC

**VENTING**

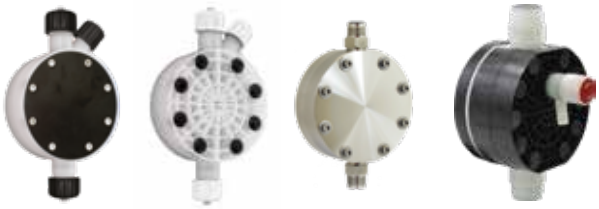
*Manual*

*Self*

### FEATURES

- High-strength PTFE diaphragm
- SINGLE-PHASE or THREE-PHASE power supply
- Mechanical single injection volume adjustment (100%-0%)
- 0.18, 0.37 or 0.55 kW motor
- Standard pump head in PVDF
- 50 and 60 Hz motors
- IP65 motor (optional)
- Also available PRIUS D **HIGH PRESSURE** versions up to 100 bar*.
- **ATEX 3G/3D** and **ATEX 2G/2D** versions also available for use in potentially explosive atmospheres

### PUMP HEADS



**PVDF** **PP** **SS** AISI316L **UMS***

* For capacities above 350 l, with integral pressure relief valves

ATTENTION: in case of spare parts orders, the UMS pump head is supplied without the corresponding safety valve. If required, the safety valve must be ordered separately and will be charged additionally.

# PRIUS P Series | PISTON

## Motor-driven pumps

PRIUS

2G 2D 3G 3D

**MAX FLOW RATE**

508 l/h

**MAX PRESSURE**

10 bar

**POWER SUPPLY**

380 VAC
220 VAC
115 VAC

**VENTING**

*Manual*
*Self*

### FEATURES

- Ceramic or Stainless Steel piston
- Pump bodies in PP and Stainless Steel
- SINGLE-PHASE or THREE-PHASE power supply
- Mechanical adjustment of single injection volume (100%-0%)
- 0.18, 0.37 or 0.55 kW motor
- Pump head available in PP and SS
- 50 and 60 Hz motors
- IP65 motor (optional)
- **ATEX 3G/3D** and **ATEX 2G/2D** versions also available for use in potentially explosive atmospheres

### PUMP HEADS

**PP** **SS** AISI316L

### PISTONS

**CERAMIC** SIALOX96 **SS** AISI420

# DOSING PUMPS ACCESSORIES

## High efficiency products

## CHEMICAL TANKS AND SAFETY BUNDS

UV-proof polyethylene containers for chemicals, complete with safety tanks, dosing pump and mixers. Capacity up to 1000 litres.

### STANDARD TANK

### SAFETY BUNDS

### ASSEMBLED TANK

Can be equipped with:

- 1 dosing pump (2 without mixer)
- 1 mixer
- 2 taps (filling and draining)1 outgassing valve
- 1 or 2 suction lances
- 2 level probes with filter (without mixer)
- 1 safety tank

## MIXERS

### MIXVN/8
### MIXVN/4
### MIXVN/2

High speed mixer 1400 RPM. AISI rod with PVC coatiAISI shaft-PVC coated, different lengths available (depending on the container).
“Marine” impeller.

### MIXN/8
### MIXN/4
### MIXN/2

Slow speed mixer 1400 RPM. AISI rod with PVC coat, AISI shaft with PVC coating, different lengths available (depending on the container).
3-blade impeller.

## MANUAL MIXERS

### MIXN/MAN

Manual mixer.
PVC shaft, different lengths (depending on the container).

### MIX WITH PISTON

Manual mixer.
PVC shaft, different lengths (depending on the container).

***Note:*** *for full technical characteristics please refer to the corresponding product data sheet.*

## LASP

Suction lances with level control, for tanks up to 1000 liters.

## LINI

Injection lance for chemical dosing in hoses. Automatic cleaning system, available with and without tap.

## MFKT

Multifunction valves for: pressure, safety, anti-siphon, bleed. Safety valve adjustment range: 1 to 18 bar. Pressure valve adjustment range: 1 to 5 bar. Delivery and connection fittings adaptable to different hose diameters. PVDF body and FKM B or EPDM o-rings.

## SEFL

Flow sensors to control the actual dosing of the chemical. They allow automatic pump re-priming.

# PULSE OUTPUT METERS

## High efficiency products

### CWFA

Woltmann pulse-emitter water meter with dry dial for cold water.

### CTFI

Pulse-emitter water meter for cold water.

**CATFI** - dry dial version

### CWCA

Woltmann pulse-emitter water meter with dry dial for hot water.

### CATCI

Pulse-emitter water meter for hot water.

### CWFAT

Woltmann dry dial pulse-emitter water meter with Teflon-coated inside and outside.

### CTFIT

Pulse-emitter water meter for cold water with Teflon-coated inside and outside.

***Note:*** *for full technical characteristics please refer to the corresponding product data sheet.*

# METERS – PULSES PER LITRE TABLE

| CTFI / CTCI | | | | | | |
|---|---|---|---|---|---|---|
| | Nominal size | | | | | |
| | 15 - 1/2" | 20 - 3/4" | 25 - 1" | 30 - 1 1/4" | 40 - 1 1/2" | 50 - 2" |
| Pulses per litre | 1 - 2 - 4 - 35 - 70 - 140 | 1 - 2 - 4 - 22 - 90 | 1 - 2 - 4 - 12 - 24 - 48 | 1 - 2 - 4 - 12 - 24 - 48 | 1 - 2 - 4 - 9 - 18 | 1 - 2 - 4 |
| Pulses per 10 litres | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 |
| Pulses per 100 litres | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 |
| Pulses per 1000 litres | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 |

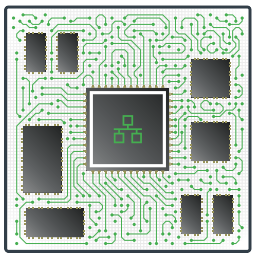
| CATFI / CATCI | | | | | | |
|---|---|---|---|---|---|---|
| | Nominal size | | | | | |
| | 15 - 1/2" | 20 - 3/4" | 25 - 1" | 30 - 1 1/4" | 40 - 1 1/2" | 50 - 2" |
| Pulses per litre | 1 - 2 - 4 - 35 | 1 - 2 - 4 - 22 - 90 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 |
| Pulses per 10 litres | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 |
| Pulses per 100 litres | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 |
| Pulses per 1000 litres | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 |

| CWFA / CWCA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Nominal size | | | | | | | |
| | 50 - 2" | 65 - 2 1/2" | 80 - 3" | 100 - 4" | 150 - 6" | 200 - 8" | 250 - 10" | 300 - 12" |
| Pulses per 10 litres | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | | | | | |
| Pulses per 100 litres | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | | | |
| Pulses per 1000 litres | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 |
| Pulses per 10000 litres | | | | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 |

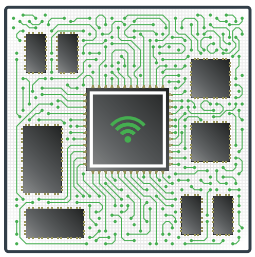
# Modem and external communication modules

## For LD, MTOWER, WD and CENTURIO controller series

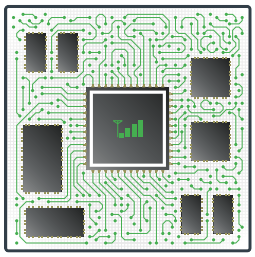
### Internal PCB Module



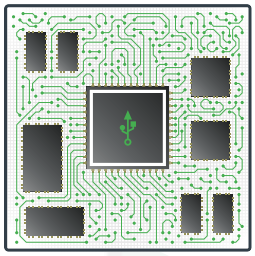
**ETHERNET MODULE**
for standard RJ45 network.



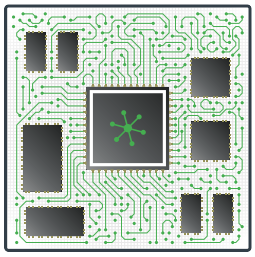
**WIFI MODULE**
for WIFI network.



**4G MODULE**
for mobile network.

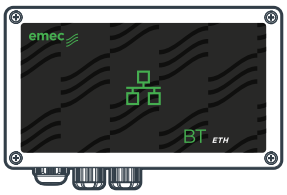


**USB MODULE**
for USB datalog recording.

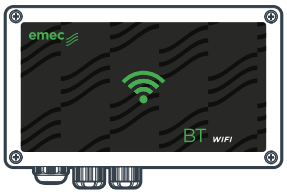


**MODBUS MODULE**
Serial communication
module for PLC connection.

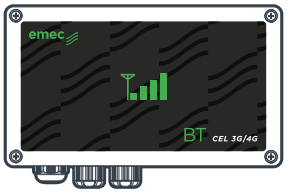
### External IP65 Module



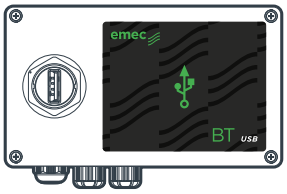

**BT ETH**
Ethernet controller for standard RJ45 network. IP65.



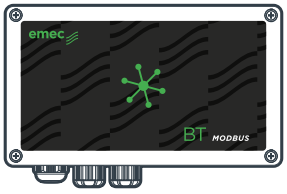

**BT WIFI**
Module for WIFI connection.
IP65.




**BT CEL**
Modem for mobile network.
IP65.




**BT USB**
USB module for USB datalog recording. IP65.




**BT MODBUS**
Serial communication
module for PLC connection.

# CENTURIO Series | PRO - TOWER - POOL

## Up to 10 channels water treatment controllers

CENTURIO **BASIC (USB, ETH, MODBUS, WIFI) | GSM**

MODBUS · ETHERNET · WIFI · USB PORT · DIGITAL SERVICES · ONLINE STATS · CUSTOMIZABLE

### ONLINE REMOTE CONTROL

- ONLINE PARAMETER READING AND SETTING
- UPLOADING AND DOWNLOADING OF SETTINGS AND DATALOGS
- REMOTE SOFTWARE UPDATE

### POWER SUPPLY

12 | 24 **VDC**

24 | 100 - 240 **VAC**

### HARDWARE FEATURES

- Full color LCD touch display
- Large storage capacity for logs
- Configurable channels with add-on modules
- High-performance ARM A5 microprocessor

### SOFTWARE FEATURES

- NIMBUS remote control
- Multi-language LINUX operating system
- Communication (standard) USB - ETHERNET - MODBUS - WIFI
- Communication (optional) GSM

### INPUTS

- 8 product level inputs
- Flow input
- 2 water meter inputs
- 1 RS485 bus probe input
- 6 slots for channels reading
- Stand-by Imput

### OUTPUTS

- 8 proportional outputs
- 6 on/off outputs
- 2 “free contact” on/off outputs
- 6 current outputs (0/4 - 20 mA)

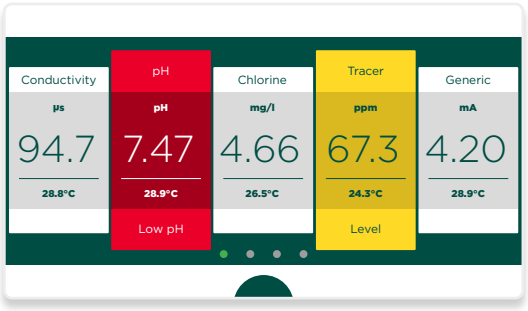
CENTURIO is the digital controller series designed by EMEC to give you the best work experience in the multiparameter control of dosing systems. High-performance hardware and software of CENTURIO makes possible a simultaneous and complete control over all the main measurement parameters, while you have access to a rich set of functions and connection options that really enhance and simplify your work.

CENTURIO is compatible with NIMBUS, EMEC's proprietary online remote control system.

The CENTURIO series includes: CENTURIO PRO, the most complete solution for every application; CENTURIO TOWER, a control system specifically designed for cooling water treatment; CENTURIO POOL, specifically designed for swimming pool water treatment.

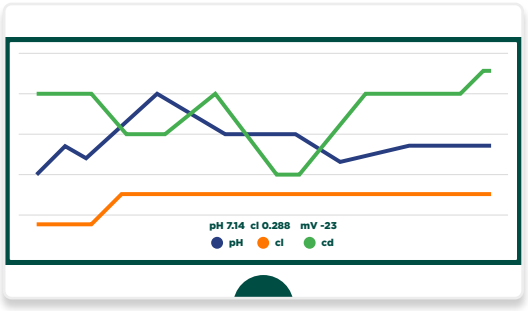
## TOUCHSCREEN DISPLAY

### LARGE 4" LCD FULL COLOR DISPLAY



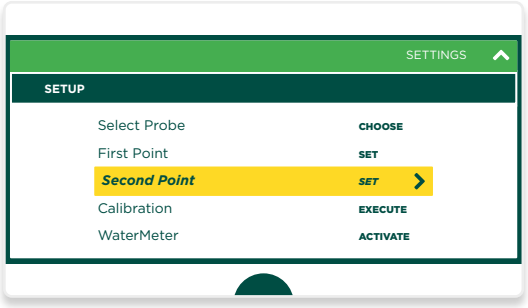

DASHBOARD

**Quick data visualization on the dashboard**



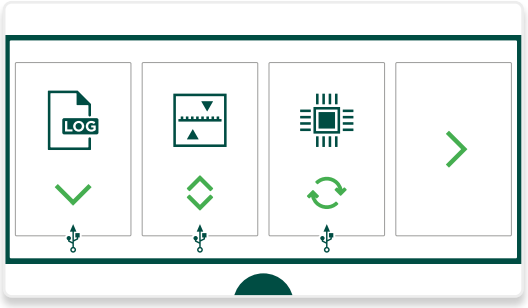

REAL-TIME STATS

**Real-time graphs and graph history**




CHANNELS SETTINGS

**Quick data visualization on the dashboard**




LOG MANAGEMENT

**Large storage and download options**

**Centurio does not suffer data loss when disconnected from the power supply**

## UP TO 10 CHANNELS (6 ANALOG)

CONDUCTIVITY | INDUCTIVE CONDUCTIVITY | pH | ORP | OPEN AMPEROMETRIC CELLS | TRACERS | mA INPUT | TURBIDITY | POTENTIOSTATIC (BROMINE/CHLORINE) | DISSOLVED OXYGEN | LASER LEVEL SENSOR | CORROSION

**CLOSED AMPEROMETRIC CELLS**

- CHLORINE DIOXIDE
- FREE CHLORINE
- TOTAL CHLORINE
- HYDROGEN PEROXIDE
- OZONE
- PERACETIC ACID
- BROMINE
- CHLORITES

# LD Multichannel Series | LD MULTICHANNEL - LD MULTICHANNEL PLUS

## Up to 2 channels plus temperature water treatment controllers

LD **BASIC (MODBUS) | USB | ETH | GSM | WIFI**

Modbus

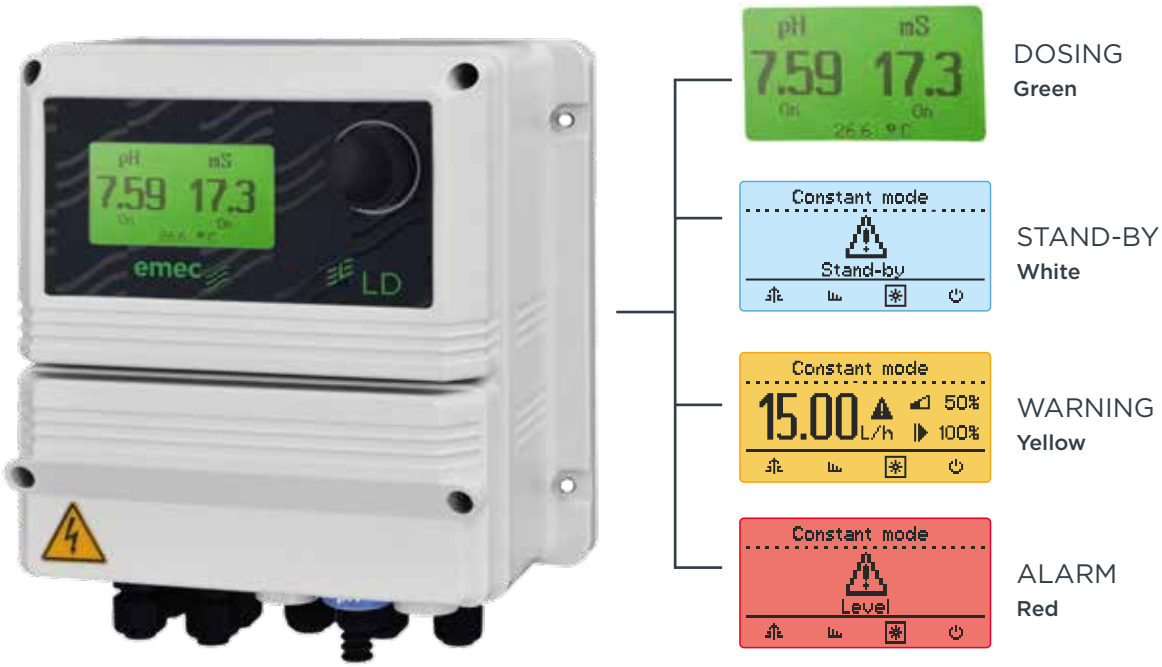
NIMBUS

DIGITAL SERVICES

LD Multichannel is the digital multi-parameter controller designed by EMEC capable of regulating two independent parameters with PID adjustment. The LD Multichannel controller is perfect for a wide range of applications including: general water treatment, cooling tower control, industrial chemical dosing, purification, agricultural use, and swimming pool disinfection.

**OPTIONAL**

- mA output
- power supply 12 VDC or 24 VDC




DOSING
**Green**

STAND-BY
**White**

WARNING
**Yellow**

ALARM
**Red**

### PARAMETERS

pH | ORP | BROMINE/CHLORINE | CONDUCTIVITY | INDUCTIVE CONDUCTIVITY | CHLORINE DIOXIDE | HYDROGEN PEROXIDE | OZONE | PERACETIC ACID | TURBIDITY | CHLORITES

### HARDWARE FEATURES

- LCD RGB display

### SOFTWARE FEATURES

- NIMBUS remote control
- Multi-language
- Communication (optional)
  ETHERNET - MODBUS - WIFI - GSM - USB

### LD MULTICHANNEL PLUS FEATURES

- 5 relays (2 setpoints; alarm; probe cleaning; circulation relay)
- Probe cleaning
- PID
- Feed forward
- Proportional + meter reading
- “Line”

### POWER SUPPLY

| | |
|---|---|
| 12 \| 24 | VDC |
| 24 | VAC |
| 100-240 | VAC |

### ALARMS

- General
- No flow
- Threshold exceeded
- Product level
- Maximum dosage
- Probe damaged

### INPUTS

- Product level
- Flow
- Temperature probe
- Stand-by

### OUTPUTS

- Alarm
- Probe cleaning with ETORB2
- Proportional
- Relay
- Flocculant pump (LDPHCL)
- mA

# LDS Series | LDS - LDS PLUS

## 1 channel water treatment controllers with setpoints (LDS) or PID regulation (LDS PLUS)

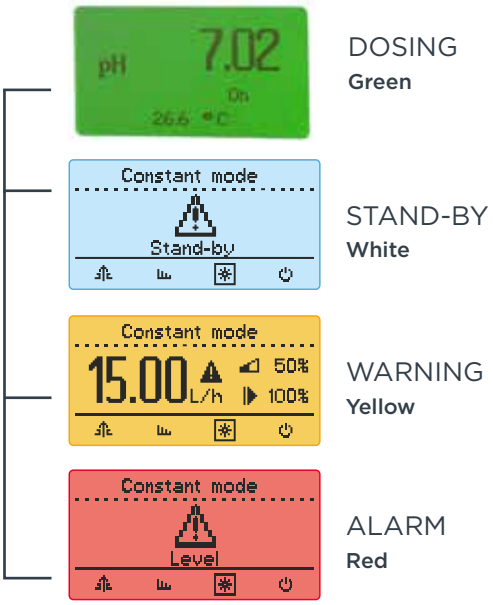
### LD BASIC (MODBUS) | USB | ETH | GSM | WIFI

Modbus
NIMBUS
DIGITAL SERVICES

LDS is the single-read digital controller designed by EMEC and is perfect for a wide range of applications including: general water treatment, cooling tower control, industrial chemical dosing, purification, agricultural use, and swimming pool disinfection.

**OPTIONAL**

- USB for LOG logging
- Current output (0/4 - 20 mA)
- Ethernet
- 4G modem
- WIFI module
- MODBUS protocol




DOSING
**Green**

STAND-BY
**White**

WARNING
**Yellow**

ALARM
**Red**

## PARAMETERS

pH | ORP | BROMINE/CHLORINE | CONDUCTIVITY | INDUCTIVE CONDUCTIVITY | CHLORINE DIOXIDE | HYDROGEN PEROXIDE | OZONE | PERACETIC ACID | TURBIDITY | DISSOLVED OXYGEN | CHLORITES

## HARDWARE FEATURES

- LCD RGB display

## SOFTWARE FEATURES

- NIMBUS remote control
- Multi-language
- Communication (optional)
  ETHERNET - MODBUS - WIFI - GSM - USB

## LDS PLUS FEATURES

- 5 relays (2 setpoints; alarm; probe cleaning; circulation relay)
- Probe cleaning
- PID
- Feed forward

## POWER SUPPLY

| | |
|---|---|
| 12 \| 24 | VDC |
| 24 | VAC |
| 100-240 | VAC |

## ALARMS

- General
- No flow
- Threshold exceeded
- Product level
- Maximum dosage
- Probe damaged

## INPUTS

- Product level
- Flow
- Temperature probe
- Stand-by
- mA water meter (only LDS PLUS)

## OUTPUTS

- Alarm
- Proportional
- Relay
- mA (optional for LDS)
- Set points (only LDS PLUS)
- Opto coupled (only LDS PLUS)

# MTOWER Series | MTOWER - MTOWER PLUS

## Up to 3 channels cooling towers controllers

TOWER **BASIC | USB | ETH | GSM | WIFI | MODBUS**

MTOWER PLUS manages three parameters simultaneously.: pH or ORP, chlorine, conductivity or inductive conductivity (to specify on order) and temperature.

MTOWER 2CH manages two parameters simultaneously: pH or ORP or chlorine, conductivity or inductive conductivity (to specify on order) and temperature.

MTOWER 1CH manages one parameter: conductivity or inductive conductivity (to specify on order) and temperature.

They can be remotely controlled through the exclusive web management system NIMBUS.

**OPTIONAL**

- inductive conductivity probe
- USB for log logging
- Current output (0/4 - 20 mA)
- Ethernet
- 4G modem
- WIFI module
- MODBUS protocol

## MTOWER PLUS 3 CH

| | |
|---|---|
| MTOWER PLUS CD/PH/CL | Conductivity, pH and chlorine |
| MTOWER PLUS CD/PH/RH | Conductivity, pH and ORP |

## MTOWER 2 CH

| | |
|---|---|
| MTOWER CD/PH | Conductivity, pH |
| MTOWER CD/RH | Conductivity, ORP |
| MTOWER CD/CL | Conductivity, chlorine |

## MTOWER 1 CH

| | |
|---|---|
| MTOWER CD | Conductivity |

### PARAMETERS

pH · ORP · CHLORINE · CONDUCTIVITY OR INDUCTIVE CONDUCTIVITY · TEMPERATURE · TRACERS

### MTOWER FEATURES

- Conductivity for “blowdown”
- 2 Timers for biocides
- Pre-bleed
- Lockout

### ALARMS

- No water flow
- 3 product level
- Bleed timeout

### INPUTS

- 6 product level
- 2 water meter
- Flow
- Temperature probe
- Stand-by

### OUTPUTS

- mA

### POWER SUPPLY

115 VAC
230 VAC

# RACK MOUNT Series | JA - J DIGITAL - DIN DIGITAL

## 1 channel plus temperature water treatment controllers

## JA PRO RACK (96x96 mm)

| | |
|---|---|
| JA PRO | Single reading |
| JA PRO PH | pH |
| JA PRO RH | ORP |
| JA PRO CL | Chlorine (Total - Free), Chlorine Dioxide, Hydrogen Peroxide, Ozone, Bromine, Peracetic Acid, Chlorites |
| JA PRO CD | Conductivity |
| JA PRO CD IND | Inductive Conductivity |

### ALARMS

- No water flow

### INPUTS

- Flow
- Temperature probe
- Probe
- Stand-by

### OUTPUTS

- 1 proportional
- 2 set points outputs / Free contact
- 1 alarm
- 1 current

### POWER SUPPLY

| | |
|---|---|
| 115 | VAC |
| 230 | VAC |

## J DIGITAL RACK (96x48 mm)

| | |
|---|---|
| J DIGITAL | Single reading |
| J DIGITAL PH | pH |
| J DIGITAL RH | ORP |
| J DIGITAL CL | Chlorine (Total - Free), Chlorine Dioxide, Hydrogen Peroxide, Ozone, Bromine, Paracetic Acid, Chlorites |
| J DIGITAL CD | Conductivity |
| J DIGITAL O3 | Ozone |
| J DIGITAL CLO2 | Chlorine Dioxide |
| J DIGITAL TEMP | Temperature |

### POWER SUPPLY

| | |
|---|---|
| 12 \| 24 | VDC |
| 115 \| 230 | VAC |

### J DIGITAL / DIN DIGITAL INPUTS

- Flow input
- Temperature probe input
- Probe input

## DIN DIGITAL DIN RAIL (6 modules)

| | |
|---|---|
| DIN DIGITAL | Single reading |
| DIN DIGITAL PH | pH |
| DIN DIGITAL RH | ORP |
| DIN DIGITAL CL | Chlorine (Total - Free), Chlorine Dioxide, Hydrogen Peroxide, Ozone, Bromine, Peracetic Acid, Chlorites |
| DIN DIGITAL CD | Conductivity |
| DIN DIGITAL O3 | Ozone |
| DIN DIGITAL CLO2 | Chlorine Dioxide |
| DIN DIGITAL TEMP | Temperature |

### POWER SUPPLY

| | |
|---|---|
| 12 \| 24 | VDC |
| 115 \| 230 | VAC |

### J DIGITAL / DIN DIGITAL OUTPUTS

- Current output
- 2 set point / relay / free contact outputs

# PROBES

## SCL - Closed amperometric cells

Chlorine dioxide (hot/ cold water), Free chlorine (organic/inorganic), Total chlorine, Hydrogen peroxide, Ozone, Paracetic acid, Bromine, Chlorites for fresh water.

## ECL - Open amperometric cells

Free chlorine (organic and inorganic) for fresh and salt water.

## EPH - pH / ERH - ORP

Working temperature max 100° C (max 135° C for EPHSN6/GK pH probes).
Max working pressure 7 bar.

## EOLUM - Dissolved oxygen

Max working temperature 50° C.
Max working pressure 10 bar.

## ETORB2 - Turbidity

Working temperature max 40° C
Max working pressure 2 bar

## ETRC2 - Tracers

Max. working temperature 50° C
Max working pressure 7 bar

## EFL - Fluorine, Ion Selective

Working temperature max 70° C
Max working pressure 7 bar

## ECDHL - Conductivity, platinum electrodes

Working temperature max 70° C
Max working pressure 7 bar

***Notes:*** *see the relevant product data sheet for complete technical characteristics.*

## ECDC - Conductivity, graphite electrodes

Working temperature max 60° C
Max working pressure 7 bar

## ECDI - Conductivity, stainless steel electrodes

Working temperature max 60° C
Max working pressure 7 bar

## EICD - Conductivity, stainless steel body

Working temperature max 130° C
Max working pressure 15 bar

## ECDIND PT - Inductive conductivity

Reading scale up to 300 mS
Working temperature max 85° C
Working pressure max 8 bar

## ECDSIND PT - Inductive conductivity

Readout scale 0-3 or 0-10 mS
Working temperature max 85° C
Working pressure max 8 bar

***Notes:*** *see the relevant product data sheet for complete technical characteristics.*

# PROBES ACCESSORIES

## NPED

Outflow electrode holder.
Working temperature
0°/50° C
Maximum pressure 5 bar

## PEF

Electrode holder for pH, ORP and closed amperometric cell probes.

## PEL

In-line electrode holder.
Max. working temperature
60° C
Working pressure max 7 bar

## NFIL

Filters.
Working temperature max
60° C
Working pressure max 7 bar

## PEC

Immersion electrode holder.
Options for Compressed air and probe cleaning system (automatic or manual control).

## MANIFOLD

Conductivity electrode holder with flow sensor and optional motorized valve with two injection points.

Maximum pressure 8 bar
Maximum temperature
75° C

## BUFFER SOLUTIONS

Buffer solutions of reference for probe calibrations.

***Notes:*** *see the relevant product data sheet for complete technical characteristics.*

# PRE-CONFIGURED SOLUTIONS, SKIDS, CABINS AND DOSING STATIONS

## Our solutions

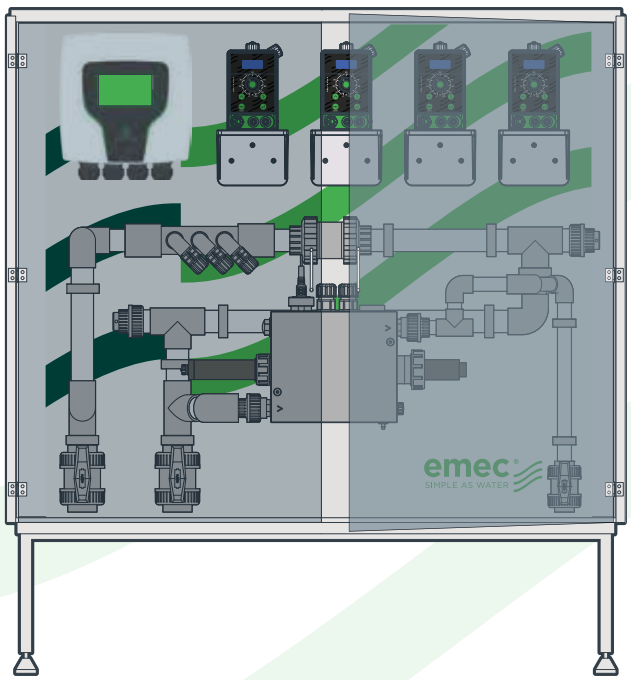
EMEC dosing pumps and measuring and control systems can be assembled with probes and accessories on panels according to specific combinations in order to offer turnkey all-in-one solutions for cooling tower systems.

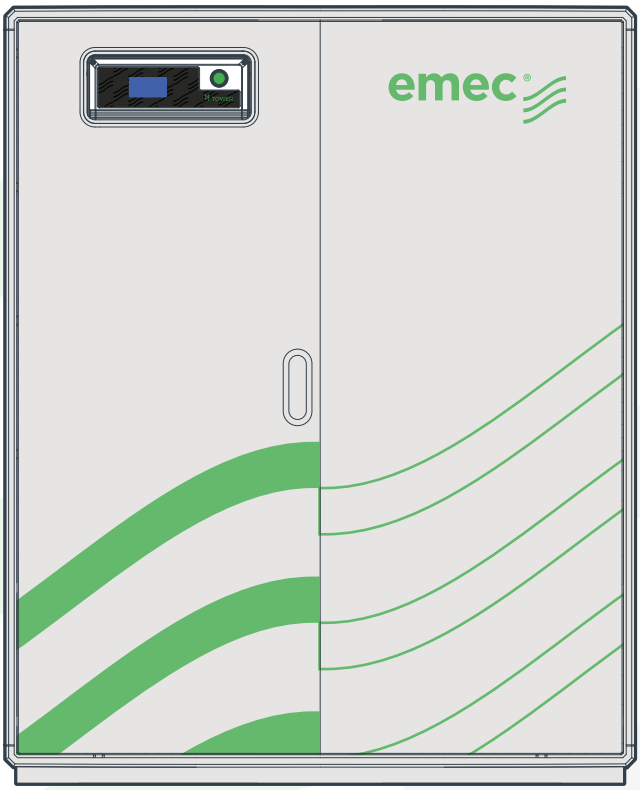
Pre-assembled solutions may have:

- **pumps, controllers or elements owned by the customer and assembled by EMEC**
- **customised logos**
- **backgrounds chosen by the customer**
- **customised sizes**
- **custom power panels**

### SYSTEMS ON SKIDS OR IN CUSTOM-MADE CABINS

The Stainless Steel or plastic skid is designed and built on client requirements.
In addition to the solution on skids, it is possible to create dosing plants in a cabin, screen guard or with window.
Electric control panels designed to control all the assembeld solution.
The final product includes electrical and piping hook-ups ready for installation.



# LOTUS

## Chlorine dioxide disinfection systems

## LOTUS BASIC | USB | ETH | GSM | WIFI | MODBUS

NIMBUS
DIGITAL SERVICES

**RELIABLE AND SAFE**
The use of chlorine dioxide in the treatment of water has been driven by an increased awareness of biological related health issues. **EMEC LOTUS** chlorine dioxide generators can be used in a variety of industries for control of micro-organisms in water systems and are especially recommended for Legionella reduction, control and prevention in cold and hot water systems. ***Micro-organisms are killed in 5 minutes in a safe way.***

**LOTUS** chlorine dioxide based biological control systems are reliable and safe, being designed so there is no requirement to handle $ClO_2$ as a gas: two liquid chemicals, Hydrochloric Acid (HCl) and Sodium Chlorite ($NaClO_2$), react together to form the chlorine dioxide required, so there is no $ClO_2$ gas or concentrated solutions outside of the process application.

Thanks to EMEC online control system NIMBUS, you will also be able to monitor and interact with **LOTUS** systems from anywhere and through a simple but powerful web interface.

# Overview table

## Lotus configuration performances

| *MODELS* | *MAX FLOW RATE $ClO_2$* | *MAX CHEMICAL CONSUMPTION** | *CONCENTRATION OF CHEMICALS* | *REACTOR* | *MAX PRESSURE (FEED WATER)* | *MAX WORKING PRESSURE**** |
|---|---|---|---|---|---|---|
| **AIR 10** | 10 **g/h** | 0,25 **l/h** | 9% **HCl** 7,5% **$NaClO_2$** | **PVC** | 2 **bar** | 8 **bar** |
| **AIR 30** | 30 **g/h** | 0,75 **l/h** | | | 3 **bar** | 5 **bar** |
| **AIR 60** | 60 **g/h** | 1,5 **l/h** | | | 3 **bar** | 5 **bar** |
| **MINI 8** | 8 **g/h** | 0,2 **l/h** | 9% **HCl** 7,5% **$NaClO_2$** | **PVC** | 5 **bar** | 8 **bar** |
| **MINI 20** | 20 **g/h** | 0,5 **l/h** | | | 5 **bar** | 8 **bar** |
| **MAXI 80** | 80 **g/h** | 2 **l/h** | 9% **HCl** 7,5% **$NaClO_2$** | **PVC** | ****** | 8 **bar** |
| **MAXI 160** | 160 **g/h** | 4 **l/h** | | | | 8 **bar** |
| **MAXI 240** | 240 **g/h** | 6 **l/h** | | | | 8 **bar** |
| **MAXI 400** | 400 **g/h** | 10 **l/h** | | | | 8 **bar** |
| **MAXI 600** | 600 **g/h** | 15 **l/h** | | | | 8 **bar** |
| **MAXI 800** | 800 **g/h** | 20 **l/h** | | | | 5 **bar** |
| **MAXI 1000** | 1000 **g/h** | 25 **l/h** | | | | 3 **bar** |
| **ULTRA 500** | 500 **g/h** | 3,15 **l/h** | 33% **HCl** 25% **$NaClO_2$** | **PVDF** | ****** | 5 **bar** |
| **ULTRA 1000** | 1000 **g/h** | 6,3 **l/h** | | | | 5 **bar** |
| **ULTRA 2000** | 2000 **g/h** | 12,6 **l/h** | | | | 5 **bar** |
| **ULTRA 3000** | 3000 **g/h** | 18,9 **l/h** | | | | 3 **bar** |
| **ULTRA 4000** | 4000 **g/h** | 25,2 **l/h** | | | | 2 **bar** |
| **EASY 8** | 8 **g/h** | 0,2 **l/h** | 9% **HCl** 7,5% **$NaClO_2$** | **PVC** | ****** | 8 **bar** |
| **EASY 20** | 20 **g/h** | 0,5 **l/h** | | | | 8 **bar** |
| **EASY 40** | 40 **g/h** | 1 **l/h** | | | | 8 **bar** |
| **EASY 80** | 80 **g/h** | 2 **l/h** | | | | 8 **bar** |

* *Max chemicals consumption value is referred to a single reagent, multiply by two to obtain the total consumption of liters/hour*

** *Depends on system pressure (max 8 bar)*

*** *For higher pressures use an external pump*

# Lotus Air

## Pressure-less chlorine dioxide generator from 10 to 60 g/h

LOTUS AIR **BASIC | USB | ETH | GSM | WIFI | MODBUS**

NIMBUS
DIGITAL SERVICES

**LOTUS AIR** is a pressure-less chlorine dioxide generator useful for those applications in which several injection points are required. Chlorine Dioxide is produced from diluted base chemicals: acid-chlorite process by Hydrochloric Acid (HCl 9%) and Sodium Chlorite ($NaClO_2$ 7,5%).

Chlorine dioxide produced by **LOTUS AIR** is stocked into a tank and then dosed in the pipeline.

Its elegant cover preserves the cleanliness of the inner components and their integrity.

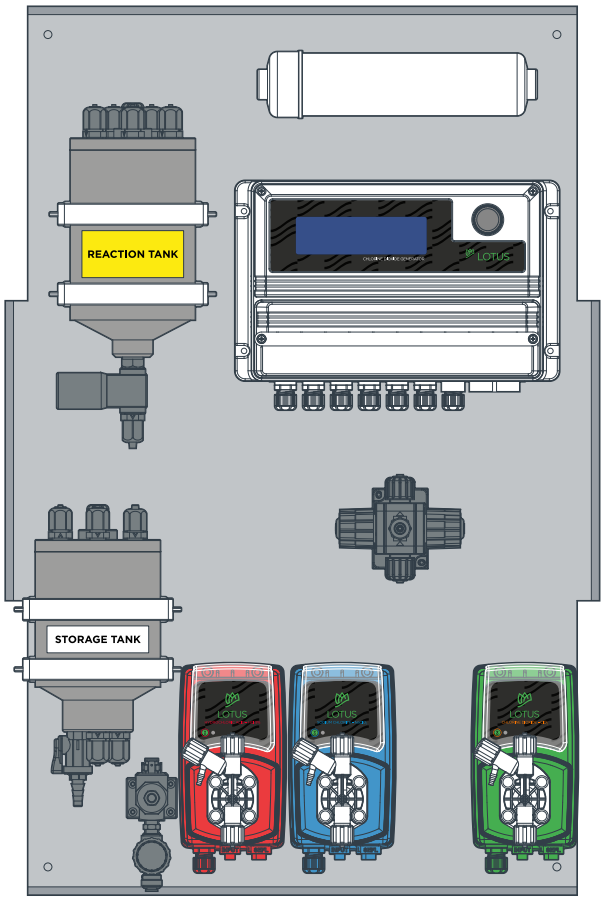
### ADVANTAGES

- Reaction at ambient pressure
- Multi-point injection
- No emission
- Diluted chemicals

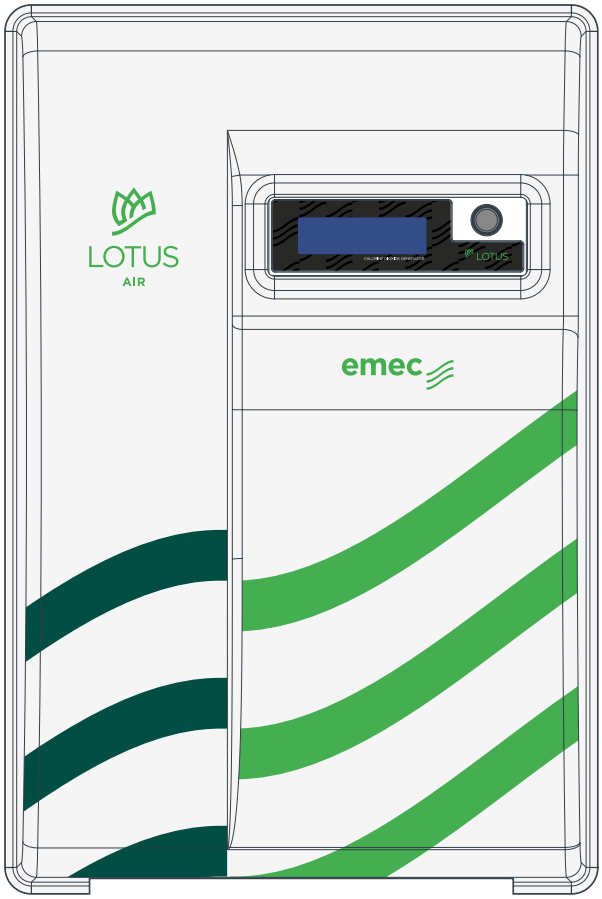
### OPTIONAL

Also available equipped with a $ClO_2$ probe (SVCL2 or SVCL17) or an ORP probe (ERH), a probe holder and a filter.

### PANEL




### COVER




### ALARMS

- product alarm
- product filling times alarm
- reactor levels alarm
- chlorine dioxide sensor alarm
- sepr alarm
- reading thresholds alarm

### INPUTS

- water meter input
- stand-by input
- levels inputs
- 0-4/20 mA input
- probes inputs

### OUTPUTS

- 0-4/20 mA output
- alarm output
- RS485 output

## MODELS

- AIR 10 / AIR 30 / AIR 60

## GAS SENSOR

- LOTUS AIR with gas sensor detection (optional).

ONLINE STATS

CUSTOMIZABLE

APP

REMOTE CONTROL

## FUNCTIONS

- BATCH chlorine dioxide production
- $ClO_2$ dosing in several mode
- Alarms: products, water, emptying
- Water meter input
- Stand-by input
- Real-time production data
- Pumps and SEFL flow sensors monitoring
- Service due date
- NIMBUS communication
- Flow control input (flow alarm)
- Tank level controls (level alarm)
- USB data log (optional)
- Ethernet module (optional)
- GSM internal modem (optional)
- MODBUS module (optional)
- WIFI module (optional)
- $ClO_2$ concentration in water measurement and control
- mA output

## FEATURES

- $ClO_2$ concentration: 2 g/l
- HCl (red), $NaClO_2$ (blue) and $ClO_2$ (green) metering pumps
- MFKT/V multifunction valve as pressure,
- Safety, anti-syphon and bleed
- Double chamber: reaction and storage
- Activated carbon filter
- ASA or fiberglass enclosure
- IP65 protection (NEMA4x) of LOTUS controller and pumps
- Wheel control for easy programming
- Working temperature: 0-45°C (32-110°F)

# Overview table

## Lotus Air configuration performances

| *MODELS* | *MAX FLOW RATE $ClO_2$* | *MAX CHEMICAL CONSUMPTION** | *CONCENTRATION OF CHEMICALS* | *REACTOR* | *MAX PRESSURE (FEED WATER)* | *MAX WORKING PRESSURE**** |
|---|---|---|---|---|---|---|
| **AIR 10** | 10 **g/h** | 0,25 **l/h** | 9% **HCl** 7,5% **$NaClO_2$** | **PVC** | 2 **bar** | 8 **bar** |
| **AIR 30** | 30 **g/h** | 0,75 **l/h** | | | 3 **bar** | 5 **bar** |
| **AIR 60** | 60 **g/h** | 1,5 **l/h** | | | 3 **bar** | 5 **bar** |

* *Max chemicals consumption value is referred to a single reagent, multiply by two to obtain the total consumption of liters/hour*

** *Depends on system pressure (max 8 bar)*

*** *For higher pressures use an external pump*

# Lotus Mini

## Chlorine dioxide generator from 8 to 20 g/h

LOTUS MINI **BASIC | USB | ETH | GSM | WIFI | MODBUS**

NIMBUS
DIGITAL SERVICES

**LOTUS MINI** is an all-round solution for all your need for water disinfection. It is safe and solid. Chlorine Dioxide is produced from diluted base chemicals: acid-chlorite process by Hydrochloric Acid (HCl 9%) and Sodium Chlorite ($NaClO_2$ 7,5%).

Its elegant cover preserves the cleanliness of the inner components and their integrity. Chlorine dioxide produced by **LOTUS MINI** can be proportional to the circulating water flow or based on a measured setpoint.

There is no storage of chlorine dioxide therefore there is no chlorine dioxide gas or concentrated solutions outside of the process application.

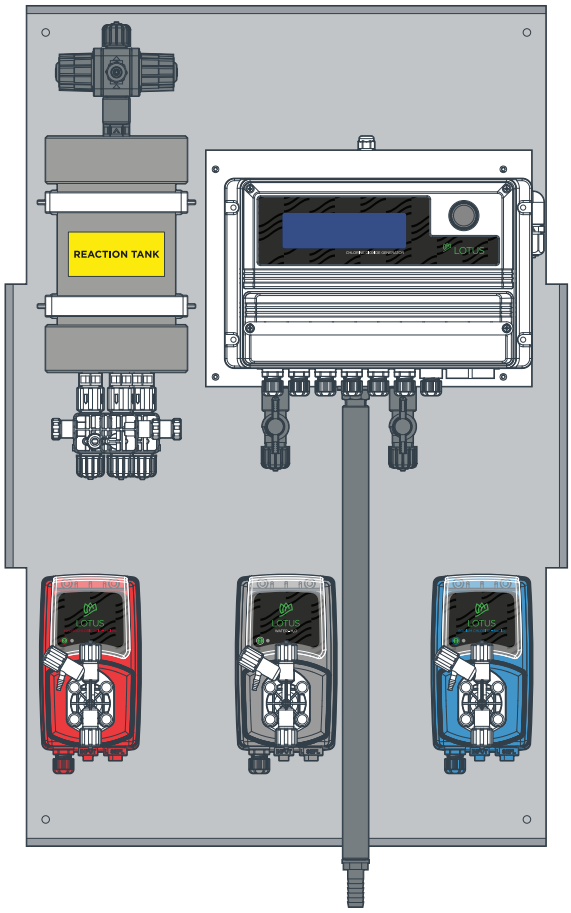
### ADVANTAGES

- Reaction at controlled pressure
- High degree of stability of the chlorine dioxide solution
- No $ClO_2$ loss due to closed reaction chamber
- Diluted chemicals

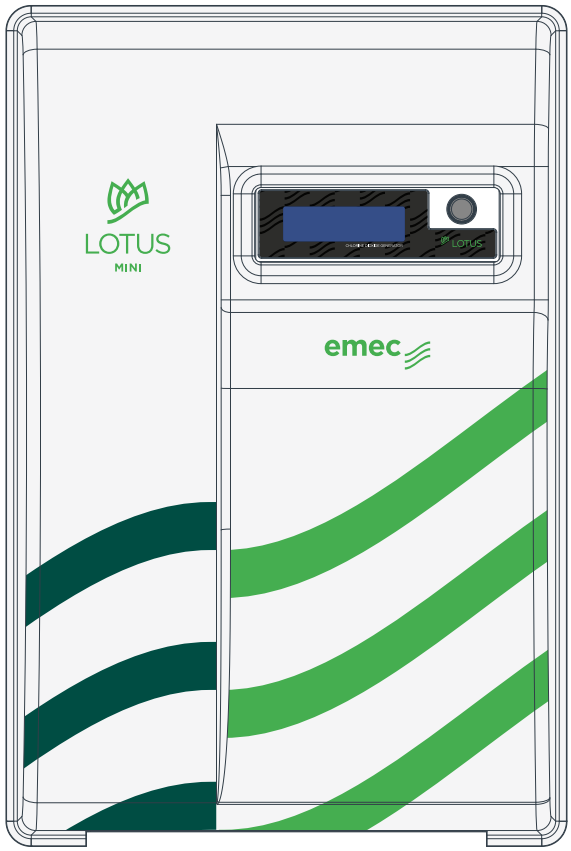
### OPTIONAL

Also available equipped with a $ClO_2$ probe (SVCL2 or SVCL17) or an ORP probe (ERH), a probe holder and a filter.

### PANEL




### COVER




### ALARMS

- sepr alarm
- chlorine dioxide sensor alarm
- reactor leakage alarm

### INPUTS

- sefl input
- stand-by input
- levels inputs
- temperature input
- probes inputs

### OUTPUTS

- pumps output
- RS485 output
- 0-4/20 mA output
- alarm output

## MODELS

- MINI 8 / MINI 20

## GAS SENSOR

- LOTUS MINI with gas sensor detection (optional).

ONLINE STATS

CUSTOMIZABLE

APP

REMOTE CONTROL

## FUNCTIONS

- Instantaneous $ClO_2$ production
- $ClO_2$ dosing in several mode
- Flow control input (flow alarm)
- Tank level controls (level alarms)
- Water meter input
- Stand-by input
- Real-time production data
- Pumps and SEFL flow sensors monitoring
- Permanent data storage with system data log (on Logbook menu)
- NIMBUS communication
- USB data log (optional)
- Ethernet module (optional)
- GSM internal modem (optional)
- MODBUS module (optional)
- WIFI module (optional)
- Service due date
- mA output

## FEATURES

- $ClO_2$ concentration: 2 g/l
- Flow control input (flow alarms)
- Tank level control (level alarms)
- HCl (red), $NaClO_2$ (blue) and dilution water (grey) metering pumps
- 3 SEFL pump dosing check
- Activated carbon filter
- MFKT/V multifunction valve as pressure,
- safety, anti-syphon and bleed valve
- PVC reaction chamber
- ASA or fiberglass enclosure
- IP65 protection (NEMA4x) of LOTUS controller and pumps
- Wheel control for easy programming
- Working temperature: 0-45°C (32-110°F)

# Overview table

## Lotus Mini configuration performances

| *MODELS* | *MAX FLOW RATE $ClO_2$* | *MAX CHEMICAL CONSUMPTION** | *CONCENTRATION OF CHEMICALS* | *REACTOR* | *MAX PRESSURE (FEED WATER)* | *MAX WORKING PRESSURE**** |
|---|---|---|---|---|---|---|
| **MINI 8** | 8 **g/h** | 0,2 **l/h** | 9% **HCl** | **PVC** | 5 **bar** | 8 **bar** |
| **MINI 20** | 20 **g/h** | 0,5 **l/h** | 7,5% **$NaClO_2$** | | 5 **bar** | 8 **bar** |

* *Max chemicals consumption value is referred to a single reagent, multiply by two to obtain the total consumption of liters/hour*

** *Depends on system pressure (max 8 bar)*

*** *For higher pressures use an external pump*

# Lotus Maxi

## Chlorine dioxide generator from 80 to 1000 g/h

LOTUS MAXI **BASIC | USB | ETH | GSM | WIFI | MODBUS**

NIMBUS
DIGITAL SERVICES

**LOTUS MAXI** is one of the largest product among EMEC Chlorine Dioxide generators and is used in all those cases in which high production capacity is required, such as large water treatment plants. Chlorine Dioxide is produced from diluted base chemicals: acid-chlorite process by Hydrochloric Acid (HCl 9%) and Sodium Chlorite ($NaClO_2$ 7,5%).

Chlorine dioxide produced by **LOTUS MAXI** is set to be proportional to the circulating water flow or based on a setpoint, it is then dosed into the water flow.

It can also be controlled remotely via the web application NIMBUS through a 2G/3G modem or a lan adapter, while Modbus is available as an option.

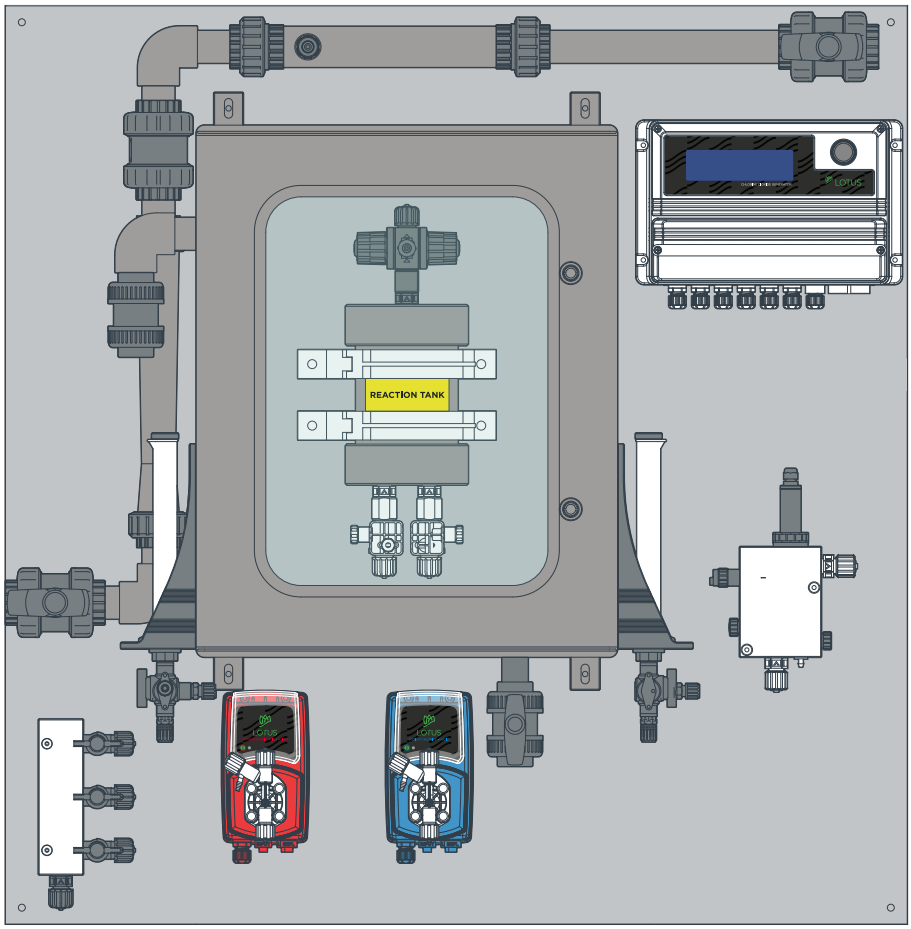
### ADVANTAGES

- Reaction at controlled pressure
- High degree of stability of the chlorine dioxide solution
- No $ClO_2$ loss due to closed reaction chamber
- Diluted chemicals

### OPTIONAL

Also available equipped with a $ClO_2$ probe (SVCL2 or SVCL17) or an ORP probe (ERH), a probe holder and a filter.

### PANEL




### ALARMS

- sepr alarm
- chlorine dioxide sensor alarm
- reactor leakage alarm

### INPUTS

- sefl input
- stand-by input
- levels inputs
- temperature input
- probes inputs

### OUTPUTS

- pumps output
- RS485 output
- 0-4/20 mA output
- alarm output

## MODELS

- MAXI 80 / MAXI 160 / MAXI 240 / MAXI 400 / MAXI 600 / MAXI 800 / MAXI 1600

ONLINE STATS

CUSTOMIZABLE

## GAS SENSOR

- LOTUS MAXI with gas sensor detection (optional).

APP

REMOTE CONTROL

## FUNCTIONS

- Instantaneous $ClO_2$ production
- $ClO_2$ dosing in several mode
- Flow control input (flow alarm)
- Tank level controls (level alarms)
- Water meter input
- Stand-by input
- Real time production data
- Pumps and SEFL flow sensors monitoring
- Permanent data storage with system data log (on Logbook menu)
- NIMBUS communication
- USB data log (optional)
- Ethernet module (optional)
- GSM internal modem (optional)
- MODBUS module (optional)
- WIFI module (optional)
- Service due date
- mA output

## FEATURES

- $ClO_2$ concentration: 2 g/l
- Flow control input (flow alarms)
- Tank level control (level alarms)
- HCl (red) and $NaClO_2$ (blue) metering pumps
- 3 SEFL pump dosing check
- Activated carbon filter
- MFKT/V multifunction valve as pressure, safety, anti-syphon and bleed valve
- PVC reaction chamber
- ASA or fiberglass enclosure
- IP65 protection (NEMA4x) of LOTUS controller and pumps
- Wheel control for easy programming
- Working temperature: 0-45°C (32-110°F)

# Overview table

## Lotus Maxi configuration performances

| *MODELS* | *MAX FLOW RATE $ClO_2$* | *MAX CHEMICAL CONSUMPTION** | *CONCENTRATION OF CHEMICALS* | *REACTOR* | *MAX PRESSURE (FEED WATER)* | *MAX WORKING PRESSURE**** |
|---|---|---|---|---|---|---|
| **MAXI 80** | 80 **g/h** | 2 **l/h** | 9% **HCl** 7,5% **$NaClO_2$** | **PVC** | ** | 8 **bar** |
| **MAXI 160** | 160 **g/h** | 4 **l/h** | | | | 8 **bar** |
| **MAXI 240** | 240 **g/h** | 6 **l/h** | | | | 8 **bar** |
| **MAXI 400** | 400 **g/h** | 10 **l/h** | | | | 8 **bar** |
| **MAXI 600** | 600 **g/h** | 15 **l/h** | | | | 8 **bar** |
| **MAXI 800** | 800 **g/h** | 20 **l/h** | | | | 5 **bar** |
| **MAXI 1000** | 1000 **g/h** | 25 **l/h** | | | | 3 **bar** |

* *Max chemicals consumption value is referred to a single reagent, multiply by two to obtain the total consumption of liters/hour*

** *Depends on system pressure (max 8 bar)*

*** *For higher pressures use an external pump*

# Lotus Ultra

## Chlorine dioxide generator from 500 to 4000 g/h

LOTUS ULTRA **BASIC | USB | ETH | GSM | WIFI | MODBUS**

NIMBUS
DIGITAL SERVICES

**LOTUS ULTRA** is the largest product among EMEC Chlorine Dioxide generators and is used in all those cases in which high production capacity is required, such as large water treatment plants.

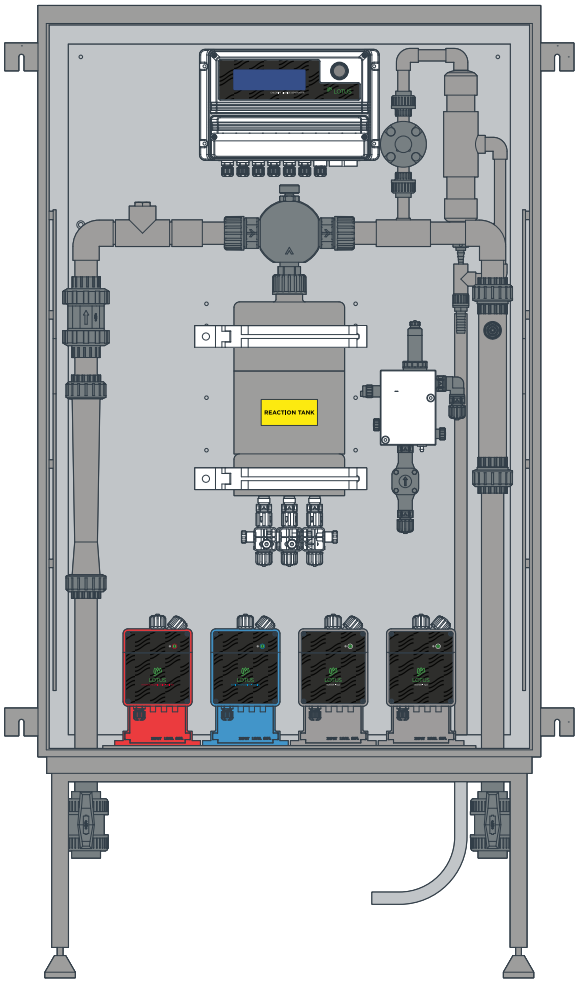
Chlorine Dioxide is produced from concentrated base chemicals: acid-chlorite process by Hydrochloric Acid (HCl 33%) and Sodium Chlorite ($NaClO_2$ 25%).

Chlorine dioxide produced by **LOTUS ULTRA** is set to be proportional to the circulating water flow or based on a setpoint, it is then dosed into the water flow.

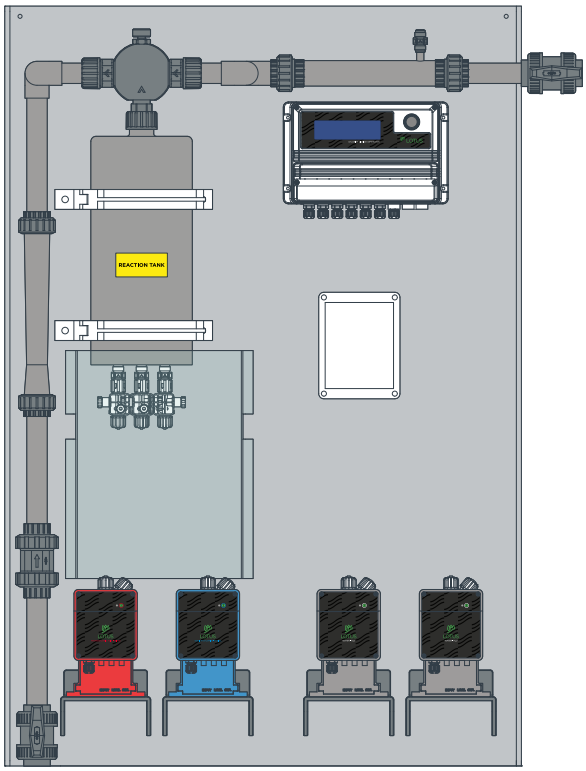
### ADVANTAGES

- Reaction at controlled pressure
- High degree of stability of the chlorine dioxide solution
- No $ClO_2$ loss due to closed reaction chamber
- Diluted chemicals

### SKID




### PANEL




### ALARMS

- sepr alarm
- chlorine dioxide sensor alarm
- reactor leakage alarm

### INPUTS

- sefl input
- stand-by input
- levels inputs
- temperature input
- probes inputs

### OUTPUTS

- pumps output
- RS485 output
- 0-4/20 mA output
- alarm output

## MODELS

- ULTRA 500 / ULTRA 1000 / ULTRA 2000 / ULTRA 3000 / ULTRA 4000

ONLINE STATS

CUSTOMIZABLE

## GAS SENSOR

- LOTUS ULTRA with gas sensor detection (optional).

APP

REMOTE CONTROL

## FUNCTIONS

- Instantaneous $ClO_2$ production
- $ClO_2$ dosing in proportional mode
- Flow control input (flow alarm)
- Tank level controls (level alarms)
- Water meter input
- Stand-by input
- Real-time production data
- Pumps and SEFL flow sensors monitoring
- Permanent data storage with system data log (on Logbook menu)

## FEATURES

- Service due date
- LOTUS controller
- HCl (red) and NaClO2 (blue) metering pumps
- 2 pumps for dilution water (grey)
- 4 SEFL flow sensors as security
- MFKT/V multifunction valve as pressure,
- Safety, anti-syphon and bleed valve
- PVDF reaction chamber
- IP65 protection (NEMA4x) of LOTUS controller
- ENCODER wheel control
- Working temperature: 0-45°C (32-110°F)
- mA output
- ClO2 probe reading
- Temperature probe reading (probe and accessories not included)

# Overview table

## Lotus Ultra configuration performances

| *MODELS* | *MAX FLOW RATE $ClO_2$* | *MAX CHEMICAL CONSUMPTION** | *CONCENTRATION OF CHEMICALS* | *REACTOR* | *MAX PRESSURE (FEED WATER)* | *MAX WORKING PRESSURE**** |
|---|---|---|---|---|---|---|
| **ULTRA 500** | 500 **g/h** | 3,15 **l/h** | | | | 5 **bar** |
| **ULTRA 1000** | 1000 **g/h** | 6,3 **l/h** | | | | 5 **bar** |
| **ULTRA 2000** | 2000 **g/h** | 12,6 **l/h** | 33% **HCl** | **PVDF** | ** | 5 **bar** |
| **ULTRA 3000** | 3000 **g/h** | 18,9 **l/h** | 25% **$NaClO_2$** | | | 3 **bar** |
| **ULTRA 4000** | 4000 **g/h** | 25,2 **l/h** | | | | 2 **bar** |

* *Max chemicals consumption value is referred to a single reagent, multiply by two to obtain the total consumption of liters/hour*

** *Depends on system pressure (max 8 bar)*

*** *For higher pressures use an external pump*

# Lotus Easy

## Chlorine dioxide generator from 8 to 80 g/h

LOTUS EASY **BASIC | USB | ETH | GSM | WIFI | MODBUS**

NIMBUS
DIGITAL SERVICES

**LOTUS EASY** is the best solution if you want a simple but professional way to produce chlorine dioxide, thanks to an integrated All-in-One Controller equipped with two metering pumps. Chlorine Dioxide is produced from concentrated base chemicals: acid-chlorite process by Hydrochloric Acid (HCl 9%) and Sodium Chlorite ($NaClO_2$ 7,5%).

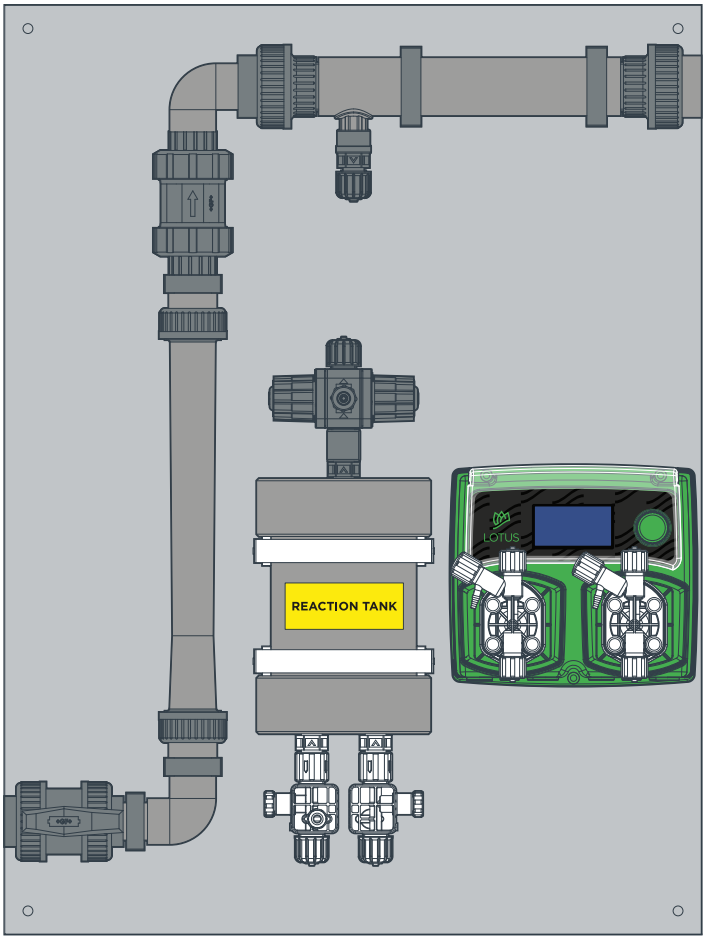
There is no storage of chlorine dioxide therefore there is no chlorine dioxide gas or concentrated solutions outside of the process application.

**LOTUS EASY** is designed so that the reaction to produce chlorine dioxide takes place in a reaction chamber. Multi function valves on injection points ensure security of the reaction chamber.

### ADVANTAGES

- Reaction at controlled pressure
- High degree of stability of the chlorine dioxide solution
- No $ClO_2$ loss due to closed reaction chamber
- Diluted chemicals

### PANEL




### ALARMS

- sefl alarm
- bypass alarm
- acid/chlorine level alarm
- acid/chlorine sefl alarm

### INPUTS

- mA input
- stand-by input
- acid/chlorine level input
- bypass input
- acid/chlorine sefl input
- water meter input

### OUTPUTS

- alarm output

## MODELS

- EASY 8 / EASY 20 / EASY 40 / EASY 80

ONLINE STATS · CUSTOMIZABLE · APP · REMOTE CONTROL

## FUNCTIONS

- Instantaneous $ClO_2$ production
- ClO2 dosing in proportional mode
- Level alarms
- Water meter input
- Stand-by input
- Real time production data
- Pumps and SEFL flow sensors monitoring
- Service due date
- By-pass flow detection
- mA (0-20mA) input

## FEATURES

- $ClO_2$ concentration: 2 g/l
- Level alarms
- 2 flow sensors
- MFKT/V multifunction valve as pressure,
- safety, anti-syphon and bleed
- Static mixer
- PVC reaction chamber
- Working temperature: 0-45°C (32-113°F)
- 600 x 800 mm panel mounting
- By-pass diametre: DN 40

# Overview table

## Lotus Easy configuration performances

| *MODELS* | *MAX FLOW RATE $ClO_2$* | *MAX CHEMICAL CONSUMPTION** | *CONCENTRATION OF CHEMICALS* | *REACTOR* | *MAX PRESSURE (FEED WATER)* | *MAX WORKING PRESSURE**** |
|---|---|---|---|---|---|---|
| **EASY 8** | 8 **g/h** | 0,2 **l/h** | | | | 8 **bar** |
| **EASY 20** | 20 **g/h** | 0,5 **l/h** | 9% **HCl** | **PVC** | ** | 8 **bar** |
| **EASY 40** | 40 **g/h** | 1 **l/h** | 7,5% **$NaClO_2$** | | | 8 **bar** |
| **EASY 80** | 80 **g/h** | 2 **l/h** | | | | 8 **bar** |

* *Max chemicals comsumption value is referred to a single reagent, multiply by two to obtain the total consumption of liters/hour*

** *Depends on system pressure (max 8 bar)*

*** *For higher pressures use an external pump*

# POOLBRAVO

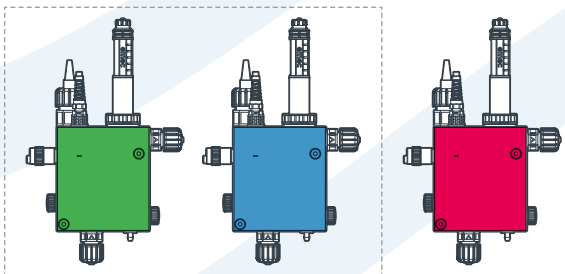
**The swimming pool made smart**

## POOLBRAVO **BASIC | USB | ETH | GSM | WIFI | MODBUS**

NIMBUS
DIGITAL SERVICES

POOLBRAVO is a turnkey product available in a variety of configurations to manage the main measurement parameters involved in pool water treatment immediately and easily, optimizing accordingly the dosing and consumption of the chemicals needed to meet the chemical and physical requirements of the water. Chemical parameters that can be measured and adjusted include pH, chlorine, hydrogen peroxide, ozone and bromine.

**COVER**



A **multi-color LED**, installed on the PEF probe holder and visible, through an aperture, signals system operating states or any alarms with different colored lights.

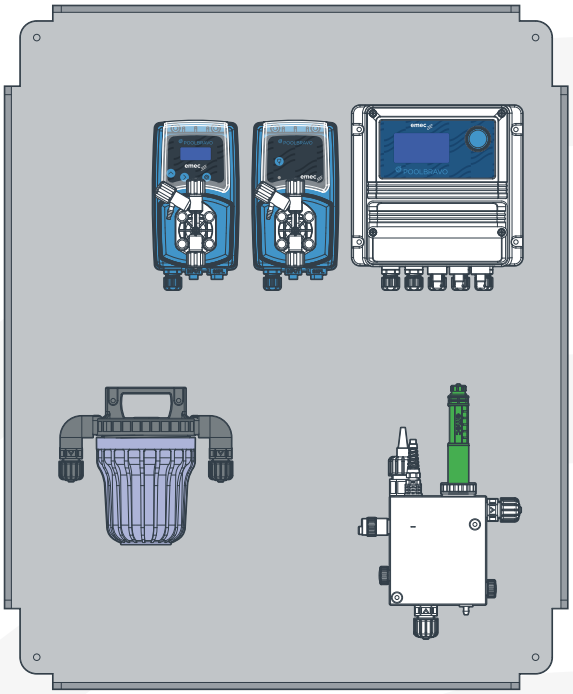
***GREEN*** *or* ***BLUE*** *(depends on version): indicates correct tuning of the device.*

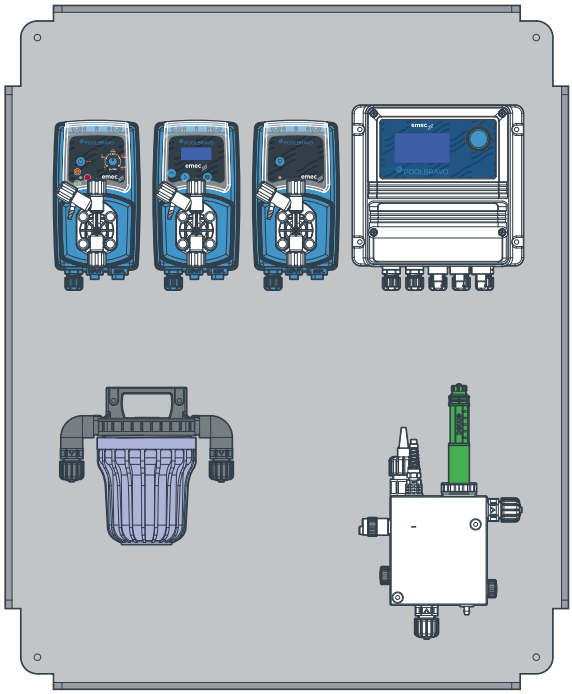
***RED****: indicates that the device is in a lock alarm state.*

POOLBRAVO is an easy-to-use, high-precision all-in-one solution that eliminates the need for manual intervention on pool water and reduces chemical consumption. An elegant cover makes POOLBRAVO suitable for any installation context and, in addition to protecting against accidental leaks, at the same time preserves the cleanliness and integrity of its internal components.

**COMPLETE CONTROL**
The LD digital multiple-reading system, which is easy to use thanks to the LCD display and ENCODER knob that allow easy navigation through its configuration menus, and the wide choice of installable probes (allowing accurate measurement of hydrogen peroxide, oxygen, bromine, chlorine, ozone, peracetic acid, and chlorine dioxide) ensure POOLBRAVO's complete control over pre-set measurement parameters and chemical dosing. EMEC V-series metering pumps complete the dosing system.

**REMOTE CONTROL**
POOLBRAVO can be controlled and set remotely via the web with any smartphone, PC or tablet, thanks to integration with the proprietary NIMBUS online system, so you have everything under control at any time.





## PANEL

- ACID PUMP
- CHLORINE PUMP

## PANEL

- ACID PUMP
- CHLORINE PUMP
- ANTI-ALGAE PUMP / FLOCCULANT

## ALARMS

- Main alarm

## POWER SUPPLY

| | |
|---|---|
| 12 \| 24 | VDC |
| 24 | VAC |
| 100-240 | VAC |

## INPUTS

- Stand-by
- Flow
- pH level (+)
- pH level (-)
- Chlorine level
- pH probe
- Chlorine probe
- Temperature probe

## OUTPUTS

- pulses proportional for pH
- pulses proportional for Chlorine
- Anti-algae / Flocculant

# Preconfigured Solutions for Pools, Spas and Water Treatment Systems

## Multiparameter Control and Dosing System for Pools, Spas and Water Treatment

## PANELS BASIC | USB | ETH | GSM | WIFI | MODBUS

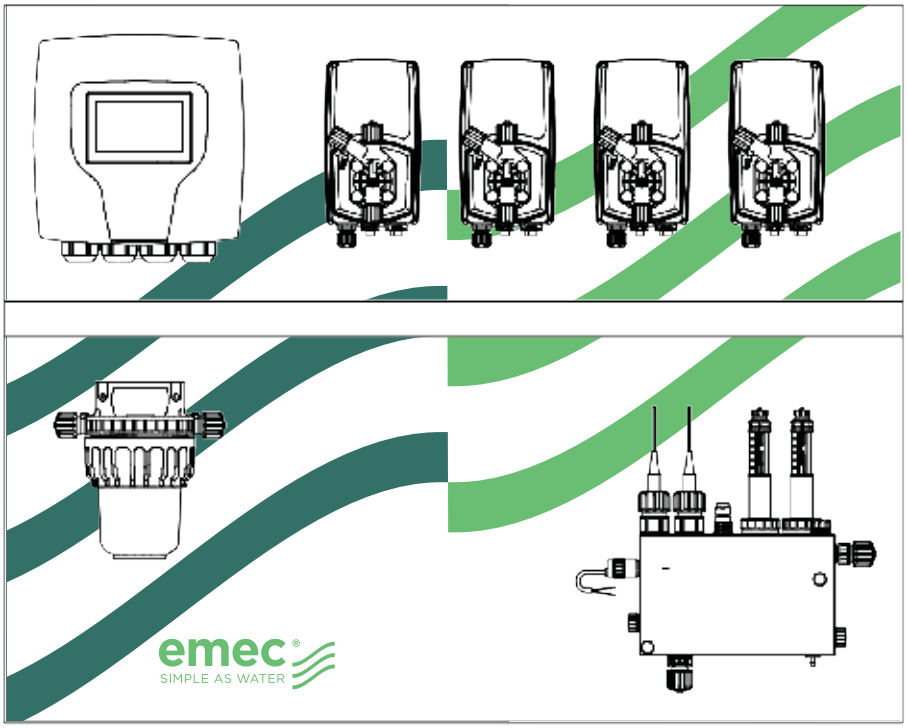
### READING PARAMETERS

pH · ORP · FREE CHLORINE · TOTAL CHLORINE · COMBINED CHLORINE · TEMPERATURE · TEMPERATURE · TURBIDITY · PERACETIC ACID · CHLORINE DIOXIDE · PEROXIDE

### GENERAL FEATURES

- Multiparameter control with WN, Velon, WD, LD and CENTURIO instruments
- Fragrance dosing
- Disinfection: bromine, ozone, flocculant, algaecide
- Dechlorination and filter backwash systems
- Remote control
- K, Prisma, T, V, WN and Velon pumps

## PA-CEDB




### TOTAL CONTROL OVER PH, ORP, FREE CHLORINE, TOTAL CHLORINE, COMBINED CHLORINE AND TEMPERATURE FLOCCULANT AND ALGAECIDE DOSING

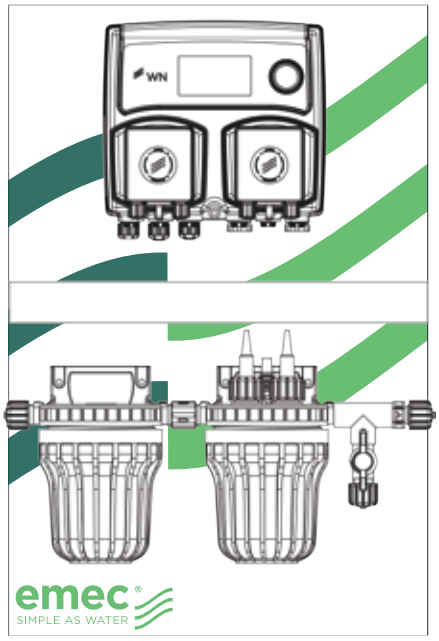
- CENTURIO multiparameter controller
- Acid dosing pump
- Chlorine dosing pump
- Flocculant dosing pump
- Algaecide dosing pump
- NFIL filter
- pH probe
- Redox (ORP) probe
- Temperature probe
- Free chlorine probe
- Total chlorine probe
- Probe holder

Pre-assembled panel, also available with custom color background

*The images on these pages are for illustrative purposes only; for more information on possible configurations, contact the order department or your sales representative.*

## PA-WNPHRH

**Pools & SPAS**




**PROPORTIONAL CONTROL OF PH AND REDOX (ORP)**

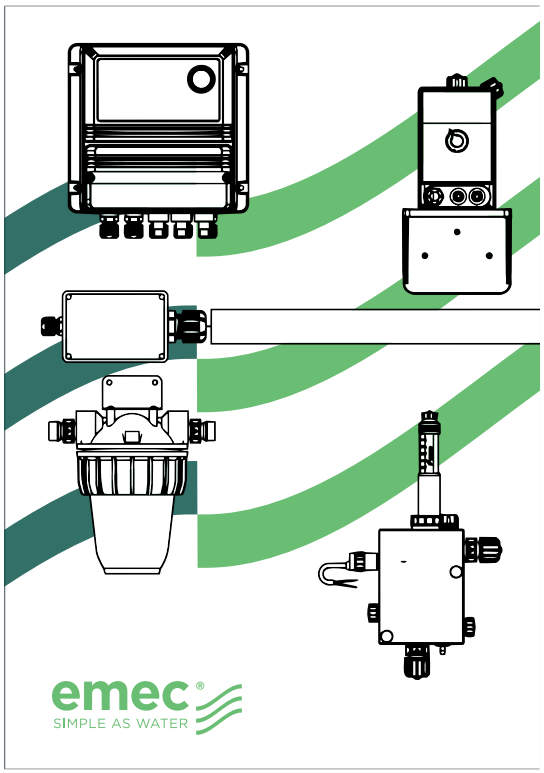
- WNPHRH 0212 controller
- NFIL filter
- ERHS Redox (ORP) probe
- EPHS pH probe
- NPED4 electrode holder

OUTPUT: **RS485**

Pre-assembled panel, also available with custom color background

## PA-LDSCL

**Water treatment**




**PROPORTIONAL CHLORINE CONTROL**

- LDPHCL | LDSCL PLUS controller
- Chlorine dosing pump
- NFIL filter
- Temperature probe
- Chlorine probe
- Flow-through electrode holder

Pre-assembled panel, also available with custom color background

*The images on these pages are for illustrative purposes only; for more information on possible configurations, contact the order department or your sales representative.*

# Preconfigured solutions for Cooling Towers

## Multi-parameter dosing and control system for Cooling Towers

## PANELS BASIC | USB | ETH | GSM | WIFI | MODBUS

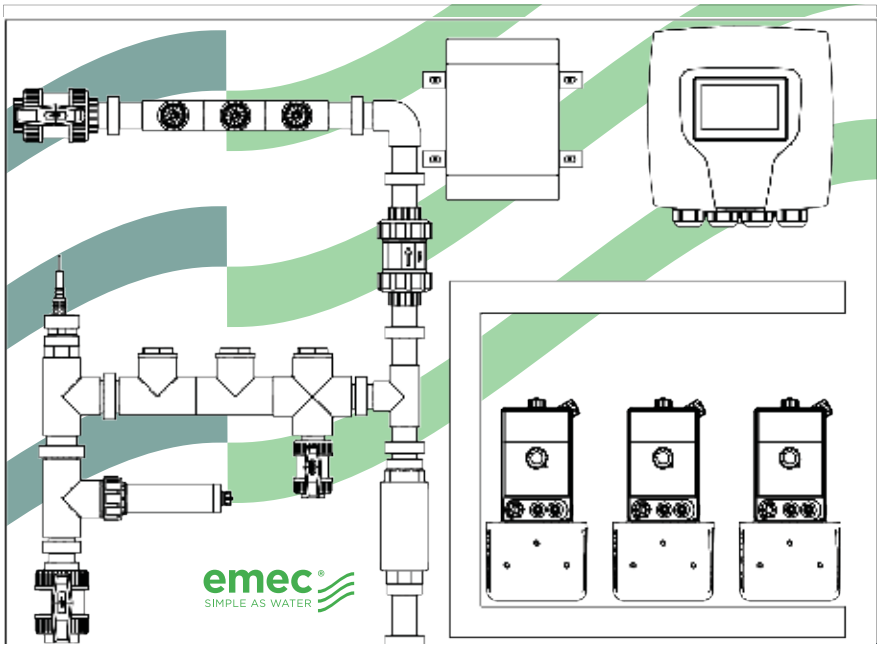
NIMBUS
DIGITAL SERVICES

### READING PARAMETERS

CONDUCTIVITY | INDUCTIVE CONDUCTIVITY | pH | ORP | CHLORINE (TOTAL, FREE AND COMBINED) | TEMPERATURE | HYDROGEN PEROXYDE | BROMINE | OZONE | CHLORINE DIOXIDE | PARACETIC ACID | TRACERS | CORROSION | TURBIDITY | mA INPUT

### GENERAL FEATURES

- Multiparameter control with LD, MTOWER and CENTURIO TOWER controllers
- Designed for industrial water treatment
- Conductivity control
- Automatic purging
- Remote control




## FEATURES

Panel with CENTURIO/MTOWER controller, featuring three measurements (CD, pH and Redox), measurement and dosing of make-up and bleed flow, complete with piping for measurement, 1", 1/2" bleed line and three injection points, equipped with 2 dosing pumps (expandable).

Available in 2 versions: Capacitive CD and Inductive CD.

**Optional:** also available with custom full-color background

## CONDUCTIVITY

**controller** | CENTURIO/MTOWER-CD-PH-RH

**p. holder** | PIPING with EV and injection points

**probes** | ECDCCPT
EPHS
ERHS

**pumps** | Up to 2x KMF1504 *(with bracket)*

## INDUCTIVE CONDUCTIVITY

**controller** | CENTURIO/MTOWER-CD-PH-RH

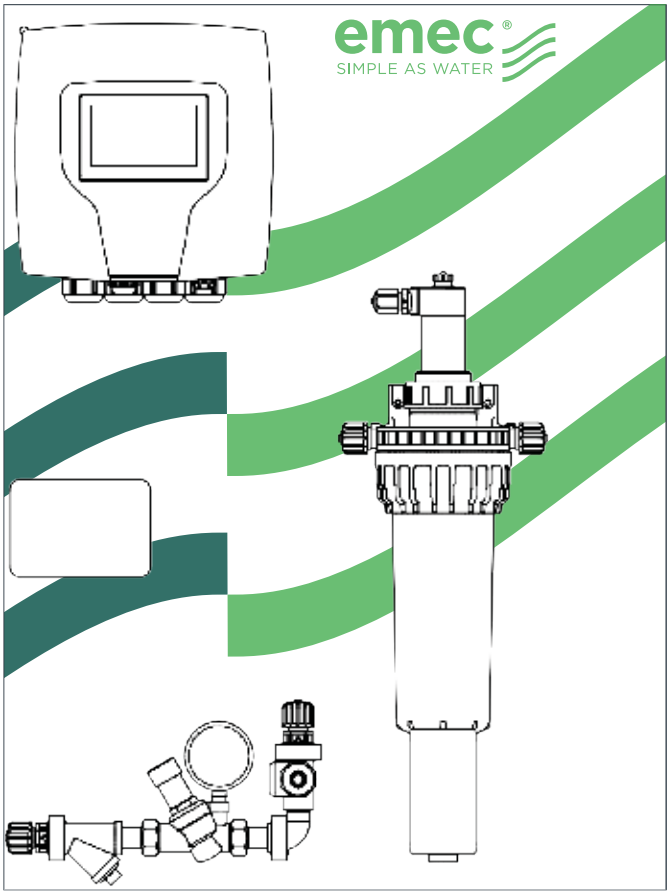
**p. holder** | PIPING with EV and injection points

**probes** | ECDIND
EPHS
ERHS

**pumps** | Up to 2x KMF1504 *(with bracket)*

*The images on these pages are for illustrative purposes only; for more information on possible configurations, contact the order department or your sales representative.*

## PA – TURBIDITY MEASUREMENT WITH CLEANING KIT




## FEATURES

**PANEL WITH CENTURIO CONTROLLER FOR TURBIDITY CONTROL, EQUIPPED WITH A CLEANING KIT FOR THE TURBIDITY PROBE.**

- Centurio controller (alternatively LD controller)
- Probe holder for turbidity probe, model NPED-E2-EV
- Turbidity probe, model ETORB2N
- Cleaning kit for turbidity probe, model ETORB2N

**Optionale:** Also available with LD controller
Also available with custom full-color background

*The images on these pages are for illustrative purposes only; for more information on possible configurations, contact the order department or your sales representative.*

# Preconfigured solutions

## SKID multi-parameter dosing and control system

## SKID BASIC | USB | ETH | GSM | WIFI | MODBUS

NIMBUS
DIGITAL SERVICES

The Skid System is a modular and autonomous system, built with specific characteristics, with the aim of assisting the operation of more complex industrial systems.

The advantage of this SKID comes from the fact that it is assembled and tested before arriving at the site of use. Integration with the main plant is therefore very rapid, and this allows interruptions to the production cycle to be minimised. An essential element of each Skid is the platform on which it is mounted. In addition to providing a solid and specific internal support, the platform must allow for easy and safe transport of the Skid after it has been assembled, and facilitate access by those responsible for its operation.

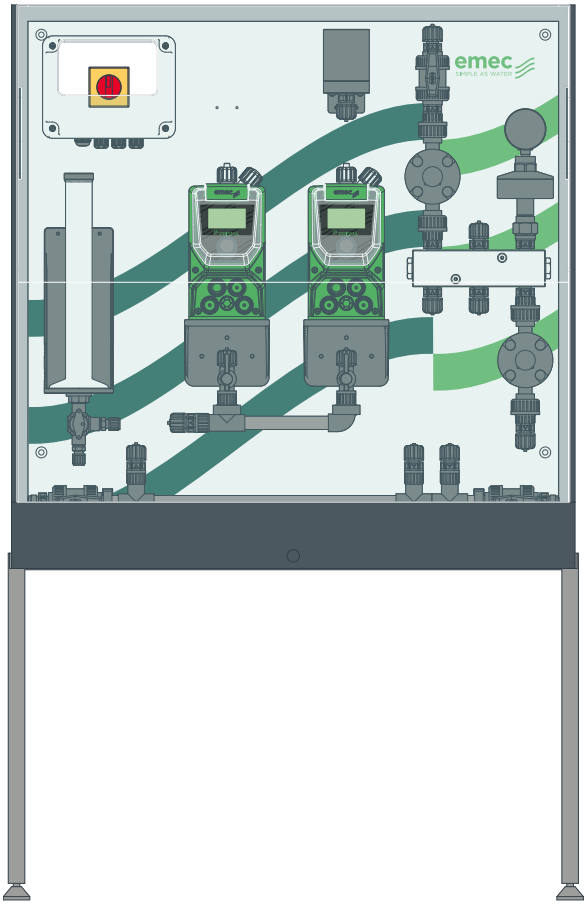
For this reason, each platform must be designed and built specifically for each individual Skid system.

### READING PARAMETERS

- CONDUCTIVITY
- INDUCTIVE CONDUCTIVITY
- pH
- ORP
- CHLORINE (TOTAL, FREE AND COMBINED)
- TEMPERATURE
- HYDROGEN PEROXYDE
- BROMINE
- OZONE
- CHLORINE DIOXIDE
- PARACETIC ACID
- TRACERS
- CORROSION
- TURBIDITY
- mA INPUT

## SKID SYSTEM MEDIUM

The MEDIUM size model designed with two **AMS MF** or **KMS MF** or **PRISMA MF** allows the complete treatment of products for medium-size industrial plants.




### OVERVIEW

- PVC panel mounted in a PVC frame, 1 injection point, 2 pumps
- Always included: PVC valves and piping, bracket, safety valve, manifold, electrical box with switch
- DN 15 PN 16 with female thread for inlet and outlet
- Pump Head: PVDF or PP (no LPV)
- O-rings: VITON, DUTRAL, WAX

### BASIC CONFIGURATION

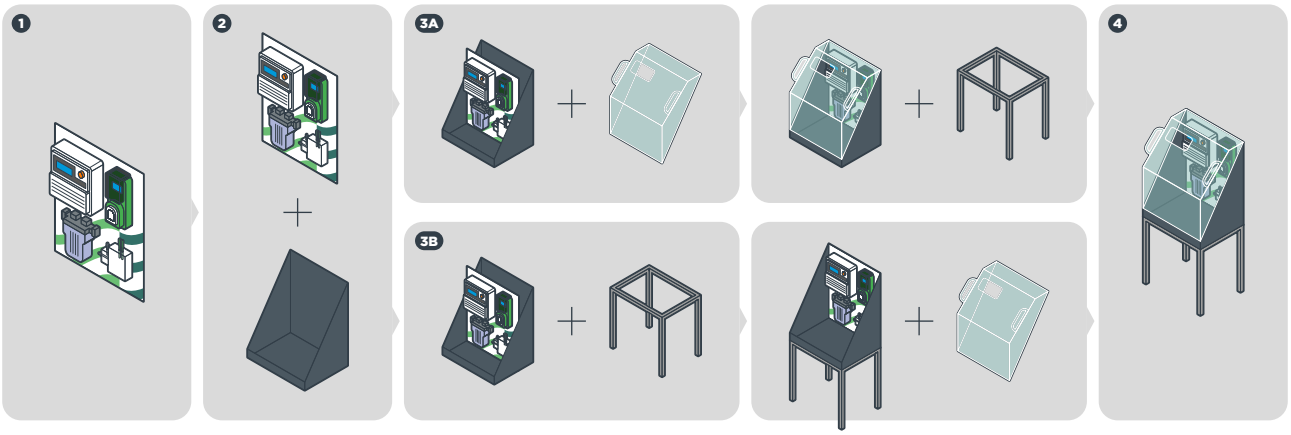
- Structure + Panel (800 x 800 mm)
- No. 1 pump: (K CL PLUS, KMS MF, AMS MF, AMS CL PLUS, PRISMA)
- No. 1 pump: (K CL PLUS, KMS MF, AMS MF, AMS CL PLUS, PRISMA)

### ACCESSORIES

- SOIM 3
- Calibration Cylinder
- Manometer
- Cover in PMMA
- Legs in steel
- Personalization: (the graphic of the panel)

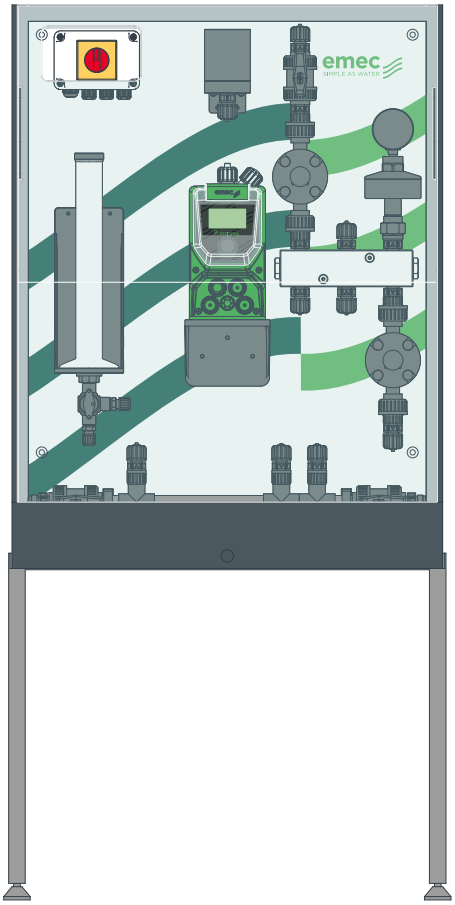
*The images on these pages are for illustrative purposes only; for more information on possible configurations, contact the order department or your sales representative.*

# CUSTOMIZE YOUR SKID SYSTEM




# SKID SYSTEM SMALL

The SMALL size model designed with a **PRISMA MF** (Multifunction dosing stepper motor pump) allows the complete treatment of products for small-size industrial plants.




### OVERVIEW

- PVC panel mounted in a PVC frame, 1 injection point, 1 pump
- Always included: PVC valves and piping, bracket, safety valve, manifold, electrical box with switch
- DN 15 PN 16 with female thread for inlet and outlet
- Pump Head: PVDF or PP (no LPV)
- O-rings: VITON, DUTRAL, WAX

### BASIC CONFIGURATION

- Structure + Panel (600 x 800 mm)
- No. 1 pump: (K CL PLUS, KMS MF, AMS MF, AMS CL PLUS, PRISMA)

### ACCESSORIES

- SOIM 3
- Calibration Cylinder
- Manometer
- Cover in PMMA
- Legs in steel
- Personalization: (the graphic of the panel)

*The images on these pages are for illustrative purposes only; for more information on possible configurations, contact the order department or your sales representative.*

# ADVANCED REMOTE MONITORING AND CONTROL SYSTEM

# NIMBUS

**Online platform for remote control**

**NIMBUS is an online platform that enables remote monitoring and control of all parameters of compatible EMEC products, allowing interactive management of probes, instrument inputs, product levels, temperature and setpoints.**

## HOW DOES NIMBUS WORK?

All EMEC instruments equipped with an encoder or touchscreen and an Ethernet or 3G/4G connection are immediately connected and ready for use.

In addition to remote interaction, NIMBUS allows you to receive email notifications regarding alarms and the status of your instruments, based on various configuration options.

## ADVANTAGES

- Reduced on-site inspections and maintenance interventions
- Real-time status of network devices (probes, outputs, alarms and setpoints)
- Customisable reports including data from all plant instruments
- Charts, tables and activity logs downloadable to a PC (CSV format)
- Activity scheduling with automatic reminder notifications

## COMPATIBLE SYSTEMS

- PRISMA
- CENTURIO PRO / POOL / TOWER
- MTOWER
- WD
- LD / LDS
- WN
- WT
- VELON
- LD OSIN PLUS
- LOTUS

## KEY FEATURES

Nimbus has been developed to deliver a complete, intuitive and secure user experience: from interactive plant status visualisation to geolocation, from remote configuration to maintenance planning.

Thanks to advanced reporting tools, role-based access management, and the highest standards of security and data protection, Nimbus supports companies and teams in efficiently monitoring their infrastructure, streamlining daily operations and enhancing overall operational control.

**INTUITIVE AND CUSTOMIZABLE DASHBOARD**

**INTERACTIVE MAP WITH REAL-TIME MONITORING OF SYSTEMS AND DEVICES**

**BUILT-IN GEOLOCATION FOR ALL YOUR INSTALLATIONS AND DEVICES**

**GUIDED DEVICE REGISTRATION**

**REMOTE SETUP AND CONTROL, ANYTIME, ANYWHERE**

**SMART TEAM MANAGEMENT WITH PROFILED ACCESS LEVELS**

**INTEGRATED CALENDAR TO PLAN TASKS AND MAINTENANCE**

**DETAILES, CUSTOMIZABLE REPORTS AT YOUR FINGERTIPS**

**MULTILINGUAL PLATFORM**

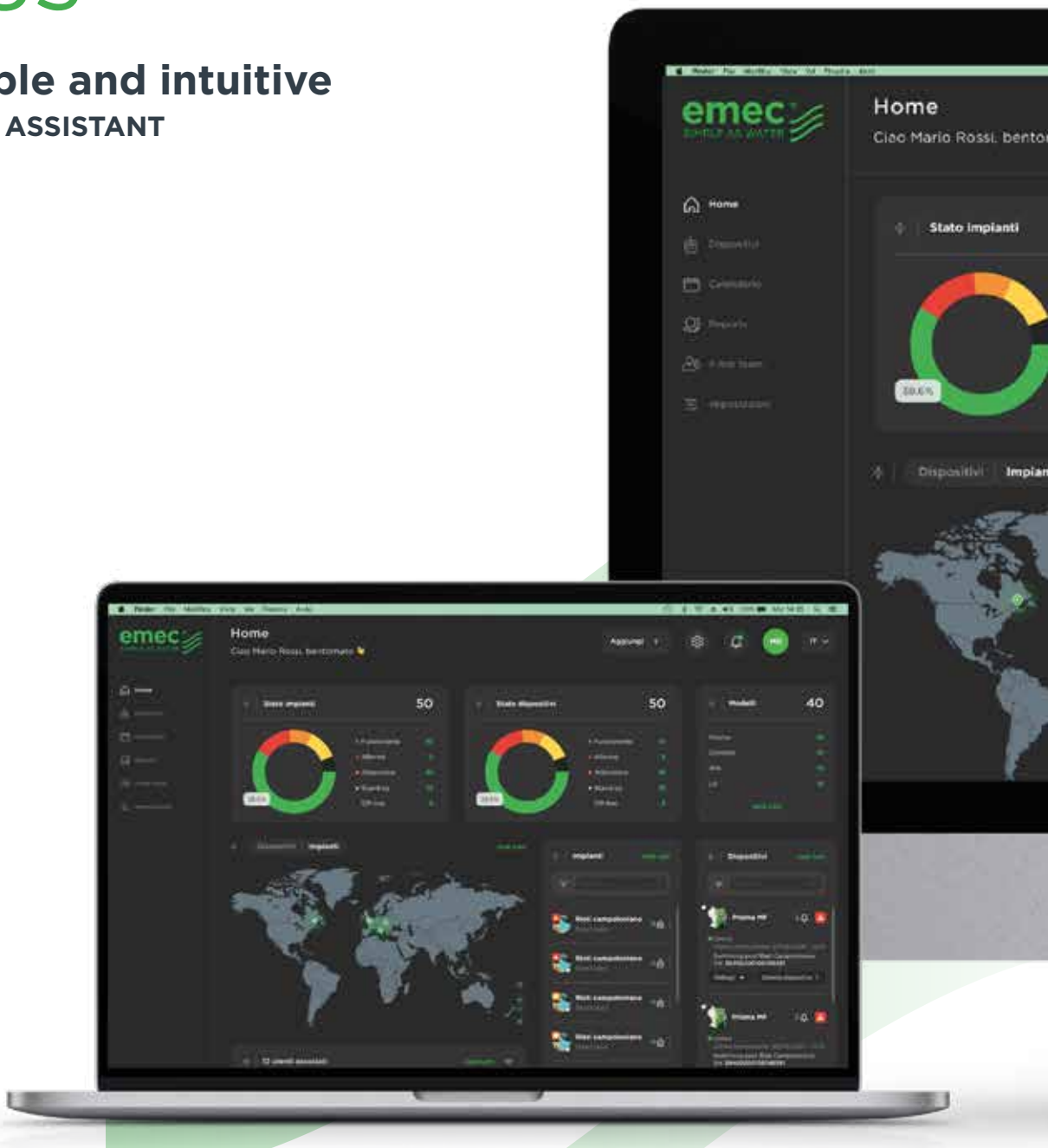
**SECURE CONNECTION WITH STATE-OF-THE-ART ENCRYPTION**

**DATA MANAGEMENT IN COMPLIANCE WITH THE HIGHEST SECURITY AND PRIVACY STANDARDS**

NIMBUS

# Fast, simple and intuitive

## YOUR SMART ASSISTANT




### A MULTILINGUAL WEB PLATFORM

The user interface is available in 34 languages

### MULTIPLE ACCESS LEVELS

Multiple users can be added to the system, with different access levels configurable for each plant.

### STATUS NOTIFICATIONS PUSH

Set up push notifications on the status of your installations.

## EVERYTHING UNDER CONTROL

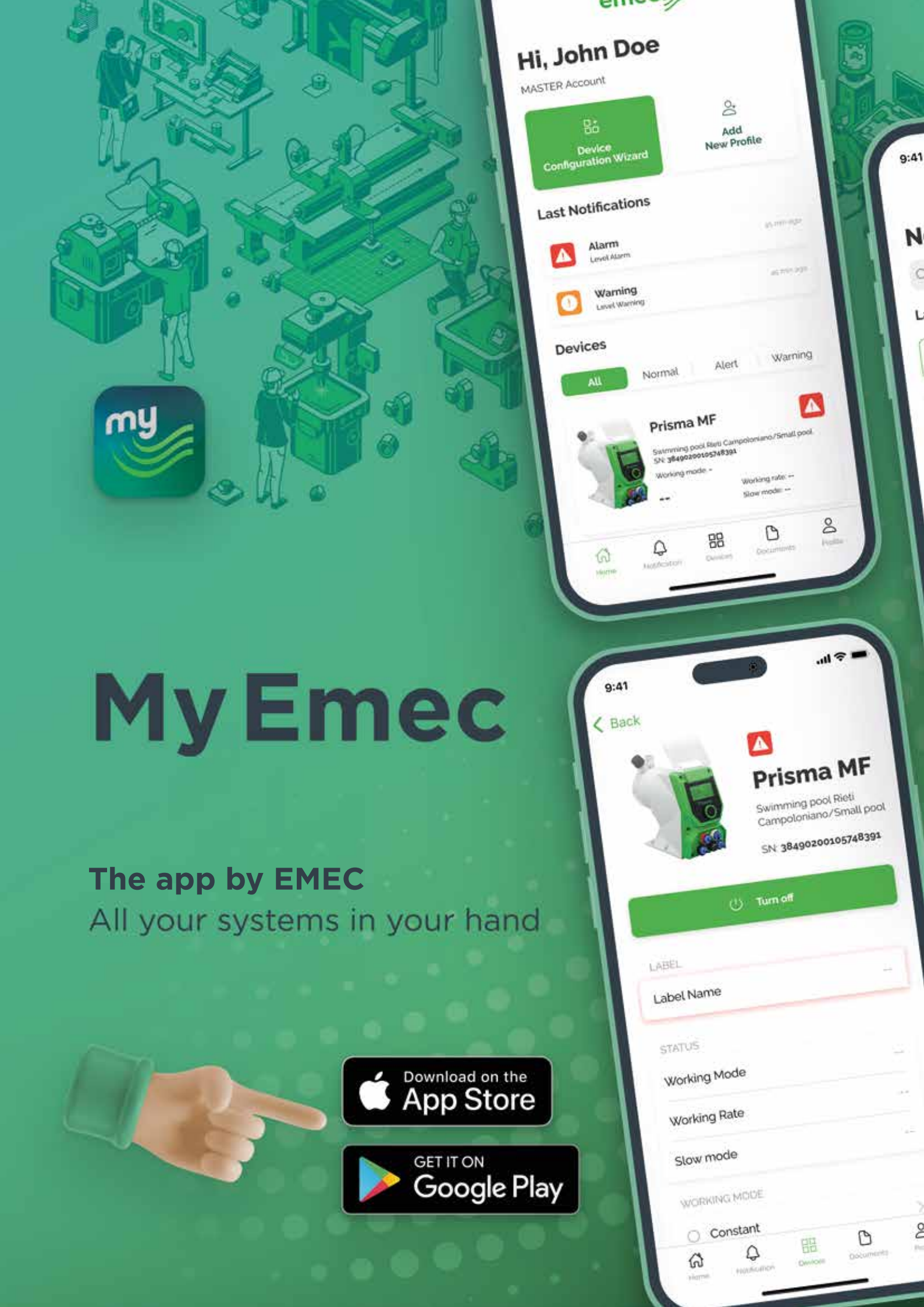
Real-time display of all your plant parameters and monitoring of the status of all probes

## REAL-TIME MANAGEMENT

Real-time management and configuration of all your plant parameters

## REAL-TIME CHARTS

Charts of all your plant parameters, based on both real-time data and stored data




# My Emec

**The app by EMEC**

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cód. 20201400

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